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AUG 80 R T PINKER, O E THOMPSON DAAG29-76-G-0292
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Selected results of a three year project to study the climatological and micro-meteorological conditions in a tropical evergreen forest, are summarized in this report. The forest area under study is in the interior of Thailand and is influenced by a cool, dry northeast monsoonal flow in the winter and a warm, moist southwest monsoonal flow in the summer. Information collected during a three year field program included ground stations temperature, relative humidity,

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precipitation, evaporation, hours of sunshine and tower measurements of temperature, dew point temperature, wind velocity, incoming and reflected solar radiation, incoming and outgoing infra-red radiation, spectral radiation and sub-surface temperature profiles in the forest and in a cleared area within the forest.

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The MICROCLIMATE

OF

A TROPICAL EVERGREEN FOREST

by

R. T. Pinker and O. E. Thompson

Preliminary Final Report on Grant
DRXRD-GS-13660

from

The Army Research Office
Durham, N.C.

to

The Department of Meteorology

University of Maryland

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ABSTRACT

Selected results of a three year project to study the climatological and micrometeorological conditions in a tropical evergreen forest, are summarized in this report. The forest area under study is in the interior of Thailand and is influenced by a cool, dry northeast monsoonal flow in the winter and a warm, moist southwest monsoonal flow in the summer. Information was collected during a three year field program sponsored by the U.S. Army Natick Laboratories and included ground stations temperature, relative humidity, precipitation, evaporation, hours of sunshine and tower measurements of temperature, dew point temperature, wind velocity, incoming and reflected solar radiation, incoming and outgoing infra-red radiation, spectral radiation and sub-surface temperature profiles in the forest and in a cleared area within the forest.

Since the topics investigated during this three year period were of a diverse nature and too numerous to account for in detail in a single report, only a selected number of research topics will be presented here. The emphasis will be on the microclimate as evidenced by the temperature and velocity fields above and within the forest and clearing, their average seasonal characteristics, their variability, the stability conditions and the micrometeorological parameters of the site.

To put the findings in a proper framework, the general climate at the site will be briefly outlined. The results are purposefully presented in an expanded format so as to enable the reader to easily extract useful information.

A selected listing of a representative data base will appear in Appendix C.

INTRODUCTION

This report serves as a final report on Grant DRXRD-GS-13660 from the Army Research office, Durham, N.C. to the Department of Meteorology, University of Maryland. The objective of the research was to prepare an analysis of the climatological and micrometeorological data obtained during a scientific field program called TREND (Tropical Environmental Data). The TREND field experiment was under the sponsorship and management of the Earth Sciences Laboratory, U.S. Army Natick Laboratories* and carried out by the Applied Scientific Research Corporation of Thailand in collaboration with several agencies of the Thai Government. The experiments were conducted during the years 1967-1970 as an interdisciplinary study of a tropical dry evergreen forest environment and embodied surveys of soil, vegetation and surveys of micrometeorological, hydrological, and biological conditions.

The experimental design for the micrometeorological survey called for the collection and processing of temperature, dew point temperature, wind speed and direction at numerous levels along both towers, various radiation fluxes at the top of the towers and near the ground, and subsurface temperature profiles near both towers. Six satellite ground stations recorded temperature, humidity, precipitation, evaporation, and sunshine duration.

The results presented in this report emanate from efforts at the University of Maryland to extract useful climatological and micrometeorological information from the raw data available to us.

*(Dr. Paul Dalrymple: Project Supervisor).

1. Site and instrumentation

The study site for the TREND experiment is the Sakaerat Forest, an area of about 80 square kilometers in Thailand situated on the Korat Plateau at approximately 14°31'N, 101°55'E which is about 60 km south-southwest of Khorat (Nakhon Ratchasima) and about 190 km northeast of Bangkok (Figure 1). Meteorological data were taken along two towers approximately 50 m high (Fig. 2) and 450 m apart, one tower in the forest, the other in a small clearing and both based at about 535 m above sea level on a tilted slightly dissected sandstone plateau which slopes from southwest to northeast. Figure 3 shows schematically the location of the various measuring instruments along each tower. The forest includes good stands of dry evergreen forest, dry dipterocarp forest and clearings in various stages of regeneration. The immediate vicinity of the towers is comprised of a two-storied forest. The top story consists almost exclusively of Hopea ferrea, with a scattering of Shorea sericeiflora, with dense and continuous crown canopy with tree tops ranging from 20-35 m high. The second story consists of the species Hydrocarpus ilicifolius, Walsura trichostemon, Aglaia pirifera, Lagerstroemia, and Memecylon ovatum with tops ranging from 5-17 m high. The forest floor was well covered with thick undergrowth. The adjacent experimental clearing site was approximately 500 m in diameter, covered with low vegetation (mainly elephant grass), at different stages of regeneration.

A general account of the instrumentation and monitoring procedures

is given in ASRCT (1969) and Dalrymple (1975). Here, only a brief outline of the instruments and data acquisition system will be presented.

Temperature measurements at both towers were made with Hewlett - Packard quartz thermometers. The sensing element is a quartz crystal whose temperature dependent probes are placed in shielded, motored aspirators supplied by Climet (Fig. 4). Two types of temperature probes were used, one for air and one for soil.

Dewpoint temperatures were measured by a dewpoint hygrometer composed of two units: the mirrored transducer and the controller. A light beam was sensed by two separate photodiodes; one sensed the direct beam from the lamp, and the other sensed the reflected beam off the mirror. The two energy levels were continuously compared and when dew formed, the transducer output was applied to the controller circuitry where it was compared to a fixed voltage. Windspeed sensors were Climet three-up anemometers (Fig. 4) having a threshold velocity of 0.3 m/sec. Wind direction was detected by Climet wind direction transmitters and vanes.

Rainfall was measured electronically by a standard weighting-type gauge from Science Associates. The gauges were located at the top and near the base of each tower.

Atmospheric pressure was measured with a precision pressure gauge made by Texas Instruments.

There was in operation an extensive solar radiation program which included arrays of instrumentation mounted on the top of the forest tower and on the forest floor. There were also instruments placed

near the surface close to the tower in the clearing. Global radiation was measured by Eppley precision spectral pyranometers. Additional pyranometers measured the standard WMO broad band spectral regions with Schott colored glass filters:

OG1 - 280 - 2800 nm

RG2 - 630 - 2800 nm

RG8 - 700 - 2800 nm

GG14 - 475 - 2800 nm

WG7 - 280 - 2800 nm

Narrow band spectral regions were measured by interference type filters, designed to isolate relatively small wavelength intervals, 100 nm in the visible and several hundred nm in the near IR. The limits of the narrow band filters for the two TREND sets were (in nm):

Above Forest Canopy	Below Forest Canopy
290-425	290-440
335-505	380-540
505-695	495-695
650-1200	700-1050
800-2350	800-2100
1800-3000	1800-3000

Complete sets of spectral pyranometers were mounted on the forest tower platform as well as below on the forest floor. Three normal incidence pyranometers measured the total direct short wave radiation as well as the spectral regions determined by the Schott OG1 and RG2 broad band filters.

Daylight illumination and UV radiation were measured with Eppley.

photometers. Both utilized Weston selenium barrier-layer photocells. The wavelength response for the UV meter was restricted to 290-380 nm.

Incoming and outgoing long-wave radiation above and below the canopy were measured by a Funk polyethylene radiometer.

2. The data and their availability

The preparation of the raw data for computer processing was a formidable task because of the condition of the tapes. The major problem in reading the tapes was related to the incremental recorder's tendency to stretch the tape (from 2400 ft to 2700 ft), resulting in poor spacing between characters. This spacing is interpreted as an inter-record gap, resulting in loss of data or loss of position on the tape drive. An older model tape drive (IBM 1401) was found to be able to read the tape better than an advanced tape drive. Subsequently, the data were repacked on a permanent storage tape in a compressed format compatible with Univac 1108 and CDC 6600, 7600 hardware.

The technical details about the repacking and use of the repacked "D" and "A" tapes will be presented in a separate "User's Manual" which will outline the extensive development of data reduction schemes which were necessary to convert the raw data into a data resource useful for analysis.

3. The climatic regime

3.1. The regional climate

Ramage (1971) defines a monsoonal region to be one in which:

1. The prevailing wind direction shifts by at least 120° between January and July.
2. The average frequency of prevailing wind directions in January and July exceeds 40%.
3. The mean resultant winds in at least one of the months exceed 3 m/sec.
4. Fewer than one cyclone-anticyclone alternation occurs every two years in either month in a 5° latitude-longitude rectangle.

Consequently, the monsoonal region would be bounded by the latitude-longitude rectangle 35°N - 25°S, 30°W - 170°E, and thus contain Thailand.

The beginning of the monsoon season in inland Thailand is not clearly defined. In the peninsula of Thailand, Crutcher et al. (1969) define the onset and retreat of the monsoon as a period of 3 - 5 consecutive days of rainfall (about May 5 and October 19). Usually, the Southwest monsoon is established in May and ends in September. The Northeast monsoon starts in November, and ends in February, with two transition periods. This pattern was also verified at the experimental site (Fig. 5), based on three years (1967-1970) of surface observations of climatological conditions. Accordingly, the selected periods for study span different stages of the monsson cycle and are of approximately

two week time intervals.

3.2 Climatological conditions at the experimental site

To place the micrometeorological studies of the forest into a proper climatological context, data from the principal *surface station were summarized over the nearly three years of record to construct a climatology of the area. Computer printouts of hourly values of temperature, relative humidity, precipitation, pan evaporation and hours of sunshine were available from this field experiment. Also, derived climatological parameters were computed.

Using the average air temperature and relative humidity values for each month, values of "effective temperature" were obtained in conventional fashion (Landsberg, 1970). Basically, the effective temperature takes into account the combined effect of temperature and humidity on a person's comfort. Effective temperature is defined as a sensation in which, for a given air temperature and humidity, the state of comfort is equal to that experienced for an environment at a lower temperature with saturated conditions.

Precipitable water, U, in the atmospheric column over Sakaerat Experiment Station was computed using the method of Smith (1966) with empirical (λ) values taken from Lettau (1970). These were computed using monthly average values of temperature and relative humidity. Values of the storage of water vapor in the atmospheric column were computed by taking the differences of precipitable water from month to month, ΔU. The advection, A, of water vapor into the atmospheric

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*There were 8 climatological surface stations in operation during the experiment (Fig. 6).

column was computed as a residual in the balance equation,

Storage = Evaporation - Precipitation + Advection

$$\Delta U = E - P + A$$

Table 1 gives the three year average of climatological elements and the derived climatological elements for each month of record at the forest site . Figure 5 shows a representative annual variation of each element. The number of hours of daylight were taken from the Smithsonian Meteorological Tables on Duration of Daylight for the 15th of each month.

During the cool, dry northeast monsoon, associated with high pressure over the Asian continent, the temperatures and relative humidities are comparatively low. The representative annual cycles of temperature and effective temperature show maximum values (27.5^{o}C, 24.9^{o}C) during the transitional month of March and minimum values (21.5^{o}C, 20.0^{o}C) in December. The annual average temperature at Sakaerat was 25.0^{o}C and annual average effective temperature was 23.5^{o}C, with only a 5-6C^{o} variation in either during the year. The relative humidity generally falls during the winter monsoon period. The relative humidity is generally largest in October, with an annual average value of 85%, and smallest in February with annual average value of about 64%. The largest difference between air temperature and effective temperature occurred during February, 1969 when the relative humidity reached its period low value. The average air temperature during that month was 27.2^{o}C while the effective temperature in the relatively cool dry

monsoonal air was only 23.4^{o}C, almost 4C^{o} cooler. The northeast dry monsoon occurs during a period of relative minimum daylength yet the sunshine recorders measured relative maximum amounts of sunshine during this period which indicates smaller amounts of cloud cover. The precipitation traces are also small averaging generally less than 1 mm/day during the northeast monsoon.

The warm and moist southwest monsoon generally occurs during the period April to September corresponding to the months of maximum daylight. The temperature, precipitation and relative humidity are generally high during this period. The total rainfall during these six months was 980 mm for 1969, 939 mm for 1970 and a relatively smaller amount of 669 mm during 1968. The double maxima in precipitation during the southwest monsoon, shown in Fig. 5, is also evident in a summary of Bangkok climatological data for the period 1943-1952 from the Royal Thai Navy which was prepared by Lettau (1970).

The relative humidities are high during these monsoonal periods yet the effective temperatures are lower than the air temperatures by a greater amount than during the dry northeast monsoon where the air temperatures are much lower. The humidity generally increases during the southeast monsoon period achieving its maximum toward the end of the period.

The higher degree of cloudiness associated with the southwest monsoon is reflected in the sunshine recordings where relatively smaller amounts of sunshine occur each day than during the northeast monsoonal period. In fact, the monsoon cycle is well illustrated by the sunshine recording which is roughly 180^{o} out of phase with the cycle of daylight

duration.

The precipitable water record tends to parallel the relative humidity record over the whole period. The evaporation tends to respond to the solar radiation available at the surface and is also controlled by the ambient relative humidity and air temperature. The evaporation is generally largest when air temperatures are high and ambient humidity is low, and generally smallest during periods of higher ambient humidity, falling temperatures and fewer hours of sunshine.

The water vapor storage term is generally small throughout the period with values within $\pm$ 10 mm/month. The advection term shows the large monsoonal influx of moist air feeding the rainfall systems of May and September with outfluxes of moist air from the region during periods of evaporation excess over precipitation during the northeast monsoon. Average rainfall during May and September is 172 mm/month and 252 mm/month respectively separated by three months of lesser rainfall with local minimum during July of 78 mm/month. The precipitation drops to near zero during the northeast monsoon season of December, January and February. For the rainfall peak of May, about 90% (146 mm) is contributed by evaporation, 17% (29 mm) is contributed by advection with 3.3 mm added to storage. During September, 62% (156 mm) is contributed by advection, 37% (93 mm) is contributed by evaporation and 1.2% (3.0 mm) is contributed by storage. During the relative minimum of July, there is a fairly vigorous advection of about 43% (57 mm) of the evaporated water out of the region leaving only about 78 mm to rain out.

During the dry months of December, January and February nearly all the evaporated water is advected out of the column with little precipitation and only minor changes in storage.

A more detailed description of the site, instrumentation and climate elements can be found in Thompson and Landsberg (1975).

4. The microclimate of the experimental site

The inventory of well established forest microclimates is meager. Relatively, little is known about the microclimates of tropical forests*. Perhaps their remoteness from research centers, and their adverse effect on the long term maintenance of the instrumentation, have restricted experimentation in such environments. The microclimates of clearings are also of interest. As already noted by Lee (1978), forest openings play important role in stand management and regeneration. The seedlings in a forest clearing are subjected to both higher radiation energy fluxes and surface temperature during the day and greater energy losses and lower temperatures at night.

In this section, the microclimatological characterization of this dry (1500 mm annual zone) tropical forest and a nearby clearing is presented. This type of characterization supplements existing studies by virtue of its geographical location vegetation type, rainfall pattern and illustration of seasonal variability.

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* Updated information and extensive bibliography on coniferous forests can be found in Jarvis and Landsberg (1976); on deciduous forests in Rauner (1976); Leigh (1975) addresses himself to the ecological aspects of tropical rain forests all over the world.

4.1 Temperature time-height cross-sections in the forest

The predominantly clear winters (8 hrs of sunshine) and cloudy summers (5 hrs of sunshine) typical of a monsoonal climate regulate to a large extent the temperature field at this Thailand forest.

The two week averaged temperature time-height cross sections along the forest tower (Figs. 7, 8, 9, 10) suggest a subdivision of the canopy into three responding sublayers:

(a) surface layer - 0 - 5 m

(b) sub-canopy layer - 5 - 25 m

(c) canopy layer - 25 - 35 m

In (a) the influence of the ground is dominant, and as such, it is a region of frequent and strong stratified conditions. Ground moisture and cloud cover tend to subdue the extremities of these conditions, the length of their duration, and the depth of the ground affected layer. It is most pronounced during the dry and clear winter season.

During July and September an isothermal structure prevails in sublayer (b). In January and April, isothermal structure forms primarily during the noon hours (10:00 a.m. - 4:00 p.m.). (Throughout this paper L.S.T. is used). During the remaining part of the day in January and April the (b) layer is characterized by inversions of 1-2^{o}C/20 m.

When clear conditions prevail, the canopy layer (c) could be viewed as the response layer to the solar heating. The intensity of this response differs from month to month, depending on additional ambient variables. For January, the temperature distortion in the top canopy

layer is strongest. This is a dry period with low winds (2.4 m/sec). The moisture stress and poor mixing might be responsible for this pronounced distortion. In April, which is still relatively clear, the ambient winds increase (4.1 m/sec) and a such, the intensity of the upper disturbed layer decreases. During September (the September data were averaged over seven days only, resulting in less smooth cross sections as compared to others), the "above" canopy region (from 40 m up) is generally isothermal. The average temperature difference between the ground and canopy top around noon time is approximately $2^{o}C$ in July and September, reaching $4^{o}C$ in January and April.

The previously discussed cross-sections attest to the dense nature of the canopy. Direct sunlight does not generally reach the ground (this was also verified from radiation measurements taken at the forest floor (Pinker et al. (1980))). The clear conditions of the dry winter monsoon are responsible for the much higher amplitude of the diurnal temperature wave at forest air interface. During the wet summer, the heating intensity is reduced at interface, and more homogeneous conditions prevail throughout the canopy.

4.2 Temperature time-height cross sections in the clearing

The structure of the temperature time-height cross sections in the clearing also calls for a three layer response subdivision:

(a) surface layer - 0 - 10 m

(b) "transition" layer - 10 - 25 m

(c) canopy affected layer - 25 - 35 m

The degree of distinction or even existence of these layers is

again a function of solar radiation intensity and mixing effectiveness.

In January, the maximal temperature difference between ground and above canopy levels amounts to $2^{o}C$. From early evening hours till sunrise, inversions in the surface layer of $1^{o}C/15$ m build up and spread to the second layer (b). They are destroyed at sunrise and a lapse condition starts to build up, reaching $2^{o}C/30$ m at noon time. The existence of grass in the clearing up to a height of 1 m caused the displacement of the warmest layer above the ground (Fig. 7b, 8b) (it was subsequently cleared). During January, the edge effect of the forest canopy on the clearing is most pronounced, affecting a 10 m layer centered around the canopy top (at 30 m).

In April, the difference between the maximum ground surface and above canopy temperatures is only $1^{o}C$ due to the more turbulent structure of the wind field. Starting at the 2 m level, late evening inversions become established and expand in depth with time. After 8:00 a.m. lapse conditions prevail and increase in depth till noon time. The edge effect of the forest canopy diminished as compared to January. The "above canopy" region (from 40 m up) is generally isothermal.

In July, the influence of the surface is confined to a shallow layer. The ground inversions are almost non-existent, while lapse conditions do exist in the first 4 m from 8:00 a.m. till 5:00 p.m. During the rest of the time, isothermal conditions dominate. This is a result of the more moderate mode of heating during the prevailing cloudy conditions and smaller radiative cooling during the night.

In September, the lapse conditions close to ground are even milder

than in July. The increased moisture content of the ground regulates the heating at the ground.

4.3 Wind speed time-height cross sections in the forest and clearing

A peculiarity in the surface winds over the Khorat site was noted (based on data for seven different months). During February, July (Figs. 11, 12) April, June, and September (not illustrated here) the maximum in wind speed occurs before sunrise and mid-night. The maximum in the surface boundary layer is generally observed at noon-time, as was the case in January and December (Figs. 13,14) at the Thailand site. A satisfactory explanation of this pattern has not yet been found.

The wind speed cross sections along the forest and clearing towers will be illustrated for January, April and July (Figs. 15, 16, 17); for the other months the pattern repeats.

A comparison of the forest and clearing average wind flows indicates that:

a) the canopy strongly reduces the wind speed (for quantitative estimates see Table 2)

b) the amplitude of the daily cycle is diminished over the forest as compared to the clearing

c) during January, the amplitude of the daily cycle is enhanced close to the surface in the clearing (up to 16 m), while in April and July it is drastically suppressed below the 16 m level. (The diurnal heating cycle enhances the turbulent mixing in the clearing by day and results in higher wind speeds. In January, it is in phase with the above canopy flow and so amplifies

the effect. During periods with an above-canopy nocturnal maximum the heating effect is out of phase and dampens the cycle).

d) in the forest, the amplitude of the daily cycle becomes suppressed below the 32 m level; the January case (Fig. 13) reveals a small increase in the wind speed around noon-time at the 25 m level.

According the Sadeh (1971), the one story forest canopy flow can be divided into three distinct zones:

(a) flow within the trunk

(b) flow within the tree crown - canopy flow

(c) flow above the canopy.

In this study, due to the two story nature of the forest, the distinction between (a) and (b) is not obvious. Seemingly a narrow "interaction" layer exists close to the canopy top and a "canopy flow" throughout the rest of the forested area.

Figures 15, 16, 17 imply that the layer below the 30 m level is almost impermeable to the wind flow. Yet, there is a noticeable difference between the three cases. The depth to which the 1 m/sec isotach penetrates does depend on the magnitude of the ambient wind speed.

In a previous study, Thompson and Pinker (1975) computed the roughness parameter (z_0) displacement height (d) and friction velocity (u_*) for this site. They used a set of half hourly averaged wind speed profiles in the 30 - 46 m layer above the forest canopy which were classified as neutral. Table 3 presents a summary of the

roughness parameters, datum devel displacements and friction velocities as previously obtained. It seems that the values of 29 m for d in January and 27 m in July are consistent with the different depth of penetration of wind during those two periods. These rather small differences seem to have a significant effect on the diffusion processes in the canopy. The perturbed temperature structure at the canopy/air interface during January, is partially due to the low winds and poor mixing (but not entirely, as the April case indicates).

4.4 Subsurface temperatures in the forest and clearing

Exchange of radiation at the ground causes periodic variations of the surface temperature. These changes affect the temperature of the soil. Flux of heat into and out of soil is a process of conduction and is proportional to the rate of change of temperature with depth. The constant of proportionality is the thermal conductivity and depends on such soil properties like porosity, moisture content and organic matter content of soil. The ground temperature will depend not only on the amount of heat transported to it but also on its ability to absorb that heat (thermal diffusivity).

A detailed soil survey of thirty square kilometers of the forest experimental site was made by the Department of Land Development, Ministry of National Development, Thailand. Soils were studied in borings and profile pits. Majority of the soils belong to the Red-Yellow

Podzolic great soil group; the parent material is sandstone (sand, silt, clay). Soil conditions in the core area are estimated to be fairly representative for general soil condition in the hilly parts of South-east Asia and those of Thailand in particular (for details see Bos (1968)).

In all four cases studied, the amplitude of soil temperature decreases with depth in the bare and vegetation covered soil and the diurnal wave penetrates deeper in the clearing than in the forest. At 40 cm the wave is almost damped out everywhere. In September due to the large water content of the ground the insulating effect is reduced, the heat conductivity is increased and the diurnal wave is found to penetrate deeper in the clearing. In the forest on the other hand, the effect of the increased heat capacity is dominant resulting in an almost isothermal structure of the soil.

Generally, in dense stands, the diurnal and seasonal temperature waves are greatly damped in comparison to clearing and the heat flux to the ground is reduced.

5. Microclimatic variability

Information about the fluctuating nature of the temperature and velocity fields in the surface layer, over a rough terrain, is of significance to problems of local atmospheric diffusion, and for the assessment of the contributing factors to the generation of turbulence. Therefore, the available data, collected at the TREND site were analyzed

to provide a better understanding of:

a) the wind velocity and temperature spectra in the frequency range of 10^{-2} - 10^{2} cy/hr

b) the dependence of turbulence spectra on stability in the frequency range 10 - 2 x 10^{2} cy/hr

c) the time-height dependence of the temperature and wind velocity variance

In this report, only the time-height dependence of the temperature and velocity variances will be discussed, while a) and b) will be presented independently.

Figures 19-22 represent the standard deviations (σ) of temperature for January, February, April and July. They were obtained by computing half hourly σ's from three hour averages over a period of two weeks. The σ's for wind speeds were obtained in a similar manner and are presented in Figs. 23-26.

During all the periods that were investigated, the largest σ's of temperature were obtained before noon, during the steep change in temperature; rather than at the early afternoon when the temperature maximum is obtained.

Inspection of the temperature cross sections in Figs. 7-10 attests to the following differences in the average maximum temperatures:

	Jan.	Feb.	Apr.	July
Forest (^{o}C)	25	30	28	27
Clearing (^{o}C)	26	32	29	28

The higher values of temperature and heating rate (clear skies) during February and April are probably the cause for the higher σ's for this period. Figures 11-14 provide the basis for the differences between these two months. In February, from midnight till early morning, the winds are higher than in April. The mixing is more effective and the T's are lower. During the daytime, the February winds speeds drop below the April values, resulting in less mixing and higher σ's.

The July maximum temperature is by $2^{o}C$ higher than the corresponding January value. Yet, the January Temperatures are higher, which might be due to the lower wind speeds and the prevailing clear sky conditions, which create larger temperature gradients.

The largest σ's for the wind velocity occur during April and July when the winds are strongest. The maximum April value well fits the general pattern of the wind structure for this transition period in this monsoonal region. The lower July values agree well with the more persistent structure of the summer monsoon flow.

In February, the largest σ's occur closer to noontime. Fig. 11 shows that the February diurnal wind velocity has a large amplitude (relative to the other periods investigated). The steepest velocity gradient occurs between 6:00 - 12:00. This is reflected in the σ's computed around the pre-noon three hour average.

From all the illustrated examples the January σ's are the lowest. There are two relative maxima. Once in the morning at the 46 m level and one around noon-time at a lower level (∿25 m). This is probably due to the small amplitude in the wind speed at the 46 m level (Figs. 13),

while at lower levels, the amplitude is larger and the variance increases.

6. Stability characteristics of the forest and clearing

An absolute measure of stability is non-existent. The Stability criteria are based, in most cases, on the available data. The most common stability criteria became the Richardson (Ri) number.

The basic form of this parameter is the flux Richardson number defined as the ratio of buoyant production to stress production of turbulent kinetic energy

$$R_f = \frac{g}{\theta_o} \frac{\overline{w\theta}}{\overline{uw} \quad \partial U/\partial z}$$

If the covariances are parameterized in terms of mean profiles

$$-\overline{uw} \equiv \nu_T \; \partial U/\partial z$$

$$-\overline{\theta w} \equiv \gamma_T \; \partial\bar{\theta}/\partial z$$

$$\Rightarrow$$

$$R_f = \frac{\gamma_T}{\nu_T} \frac{g}{\theta_o} \frac{\partial\bar{\theta}/\partial}{(\partial\bar{U}/\partial z)^2}$$

As the eddy viscosity and conductivity are unknown parameters, the

gradient Ri number is defined and used:

The expression $$R_g \equiv \frac{g}{\theta_o} \frac{\partial\bar{\theta}/\partial z}{(\partial U/\partial z)^2}$$

defines a local Ri number. The finite difference approximation, which is used for practical evaluation, is a bulk Ri number. According to Deacon (1953), the time variation of the two is uniquely related at a fixed reference level. Therefore, the bulk Ri number can be used for profile classification purposes.

Lettau (1957) used the geometric mean height for the height assignment of the difference quotient in wind and temperature. Dyer (1967) showed that the underestimation of the true gradient by the difference quotient, at the geometric mean height, is 2% for double levels and 7.7% for fourfold intervals.

To facilitate an approximate selection of the neutral cases to be used in computations of the micrometeorological parameters z_0, d and u_*, a bulk Richardson number was employed, suggested by Lettau (1957).

$$(Ri)_B = \sum_j Ri(z_j)/\sum_j z_j$$

where z_j is the geometric mean height between two levels. $(Ri)_B$ gives the overall convective stability and was found to be a useful criteria in this study. Lettau presents the following stability classification:

TABLE 4. STABILITY CLASSIFICATION OF BULK RICHARDSON GRADIENT NUMBER (After Lettau, 1957)

Stability Class	$(Ri)_L, (10^{-3}/m)$	Stability Class	$(Ri)_L, (10^{-3}/m)$
L3 = Extreme Lapse	< than -15	I1 = Weak Inversion	5 to 6
L2 = Moderate Lapse	-15 to -10	I2 = Moderate Inversion	7 to 9
L1 = Weak Lapse	-9 to -5	I3 = Strong Inversion	10 to 19
N = Neutral	-4 to 4	I4 = Extreme Inversion	> 19

$(Ri)_B$ is only a gross indicator of stability above the forest canopy and in the two layers in the clearing. If a finer subdivision is made of the layer above the canopy, two adjacent sub-layers can have different stabilities. The plotted profiles suggested a separate classification of the following forest layers: 32 m - 36 m, 36 m - 46 m, 32 m - 46 m. For the clearing, the 1 m - 16 m and 16 m - 46 m layers were considered. The results are presented in Figs. 27,28,29.

The different scales of the figures should be noted; the January values are an order of magnitude larger than the rest.

A common feature in all the graphs is the diurnal variations of stability. During noontime it is negative, except for the 36 m - 46 m layer in January. It seems that the $(Ri)_B$ number, as represented in Fig. 19 allows a much better depiction of the average conditions in the whole layer than the use of only two measurement levels. Fig. 28 indicates that in spite of the diurnal variation in the stability parameter, all the values are well within the $-4 \times 10^{-3} m^{-1}$ -- $4 \times 10^{-3} m^{-1}$ range, which was characterized by Lettau as neutral.

Fig. 29 represents the diurnal distribution of $(Ri)_B$ number for the clearing. It is evident that a $(Ri)_B$ number for the whole 1 m - 46 m layer would be completely meaningless. The lower part is influenced by the strong insolation at the ground, the upper part being modified by the forest canopy.

7. Determination of the micrometeorological parameters z_o, d, u_*

For near neutral conditions it is hypothesized that the wind speed variation with height above the forest canopy is represented by

$$u(z) = (u_*/k)\ \ln\ [(z-d + z_o)/z_o]$$

i.e., the determination of the micrometeorological parameters z_o , d and u_* is necessary for profile fitting. The knowledge of z_o would also allow estimation of the energy dissipation in the planetary boundary layer (which is of synoptic importance). Information on the displacement height is necessary for aerodynamic heat flux computation, and u_* gives the magnitude of the canopy stress.

The factors that determine the roughness parameter are not yet fully understood. The interrelation of z_o and d with wind speed, above the forest, is still uncertain. The following represents a spectrum of opinions:

Rauner (1960) - z_o increases and d decreases as wind increases

Tajchman (1967) - z_o decreases and d remains constant as wind increases

Allen (1968) - No dependence of z_o or d on wind speed
Belt (1969)

Leonard & Federer (1973) - As Allen and Belt, when d is allowed to vary. When d is fixed, z_o shows a slight tendency to decline as wind speed increases, but only for west winds.

Deacon (1953) - z_o decreases with increasing wind speed.

Kung (1963) - Vegetation cover rather than topography represents the most efficient roughness structure.

7.1 Methods and results

Graphical solution is frequently utilized to compute the micrometeorological parameters z_o, d and u_*. The method is well justified for limited amount of data as an estimate. It involves quessing a plausible d value, plotting the result for each quess, and selecting the "best" fit. Many observed that the scatter of the z_o values computed from different profiles could be quite large. Leonard and Federer (1973) give a range of 10-743 cm for a red pine forest (average tree height 11.6 m). Belt (1969) gives a range of 18-120 cm for a loblolly pine forest (average tree height 23.4 m).

To obtain a representative average, it seemed necessary to use a large sample and therefore the graphical solution was impractical.

The method which is being presently used is an adaptation of Stearns' (1970) method. Surface roughness and displacement height are determined by an iterative technique, so that the error squares on wind

speed are minimum. E_i is the error between the measured and theoretical wind speed,

$$E_i = u_i - u_* k^{-1}[\ln(\frac{z_i - d + z_o}{z_o})].$$

The two simultaneous conditions for a minimum are:

$$GZ = \frac{\partial}{\partial z_o}(\Sigma E_i^2) = 0$$

and

$$GD = \frac{\partial}{\partial d}(\Sigma E_i^2) = 0$$

Given two initial guesses $Z_o(1)$, $Z_o(2)$ and d(1), d(2) the rule of false position yields a new third approximation

$$Z_o(3) = \frac{Z_o(1)GZ(2) - Z_o(2)GZ(1)}{GZ(2) - GZ(1)}$$

where GZ(1) is evaluated using $Z_o(1)$ and d(1) as initial estimates of d. GZ(2) is evaluated with $Z_o(2)$ and d(1). If the tolerance check is not satisfactorily small, another approximation is made, replacing $Z_o(1)$ by $Z_o(2)$, GZ(1) by GZ(2), and $Z_o(2)$ by $Z_o(3)$.

The final value of Z_o together with d(1) is now used to determine GD(1). A second guess, d(2) is made and used and with $Z_o(1)$ and $Z_o(2)$ for a new approximation to Z_o and subsequently GD(2). Then:

$$d(3) = \frac{d(1)GD(2) - d(2)GD(1)}{GD(2) - GD(1)}$$

The iterative procedure was applied to the ensemble of 30-min averaged wind speed profiles in the 30 m - 46 m layer above the forest canopy, classified previously as neutral. The results of these computations are presented in Table 3.

z_o and d estimates from measured profiles are used in literature to develop regression equations; especially equations which relate z_o with vegetation height. Much caution should be exercised in using empirical regression equations. The constants in these expressions depend on such canopy characteristics as tree spacing, canopy shape and height. These equations are frequently used, because it is difficult to obtain reliable data for profile fitting.

Stanhill (1969) gives the following relation between d and canopy height, h:

$$\log d = (.9793) \log h - .1536$$

This relation is in excellent agreement with values reported in the literature for vegetation canopies of lower height.

Szeicz et al. (1969) found the following empirical relation between z_o and h:

$$\log (z_o) = \log (h) - .98$$

Fig. 21 results from estimates of d and z_o using these formulae (for canopy height values of 29 m - 35 m), summary of several other studies, along with our results, in which Stearns' method was used. Stanhill's formula yields a d height some 4 - 10 m smaller than the values estimated from the profiles. The Szeicz formula yields a result which is consistent with the profile estimate for September but not for January or June.

A test was run for possible correlation between z_o and d with wind speed. Table 5 shows the results of a simple correlation-regression analysis applied to the ensemble of 384 cases in January, June, September. The z_o is found to be an increasing function of wind speed, and d, a decreasing function of wind speed, which supports the findings of Rauner. Both parameters correlate best with the wind speed near the canopy.

SUMMARY

This report presents the results of a comprehensive climatological and micrometeorological investigation of a dry tropical evergreen forest.

The area under study is influenced by a cool, dry northeast monsoonal flow generally off the Asian continent during the period from November to February and by a warm, moist southwest monsoonal flow off the Andaman Sea and the Gulf of Thailand during the period from April to September. This latter period is characterized by two distinct rainfall surges in May and September separated by a period of lesser rainfall during June and July. The climatic regime at the forest site is somewhat similar to that at Bangkok, 190 km to the southwest. However, differences in elevation and significant differences in the heat and moisture balance in the forest yields a consistent cool bias of about 2.5^{o}C in the forest and a more complicated interruption of the annual cycle of relative humidity compared with Bangkok. Both stations exhibit lowering temperatures and relative humidities during the cool northeast monsoon. The divergent flow around the Asian continental high pressure cell suppresses the precipitation and leads to an advective flux of moisture out of the Thailand region and relatively low precipitable water values.

During the warm, moist southwest monsoon, the temperature, relative humidity, precipitable water and precipitation are all relatively high. Sakaerat, Bangkok and several other stations in southeast Asia show double maxima in precipitation during the season, the first surge during spring being supported largely by high amounts of evaporation but the second and larger surge during late summer and fall being supported by a large advection of moisture into the region from maritime sources to the south and southwest.

The material presented in the report also depicts the seasonal variation of the microclimate of a dry evergreen tropical forest and a nearby clearing. Although the annual amplitude of ambient temperature in this part of the world is relatively small (approximately 6^{o}C), the forest microclimate exhibits seasonal variability, induced primarily by the mode of heating and availability of moisture. The shielding effect of the canopy on the microclimate close to the ground in the "living space" is very much dependent on the prevailing cloudiness conditions which regulate the intensity of heating at the canopy top. It may be strong, amounting up to 4^{o}C, or non-existent.

Almost independent of the ambient wind speed the ventilation in the living space would be small, although the depth of penetration of wind flow below canopy varies.

The relatively small clearing (500 m in diameter) was cut for the purpose of studying the effects of deforestation in this type of an environment. It was found that the surface temperature difference between the clearing and below the canopy during the day can reach up to 4^{o}C. During the night, the clearing loses heat more effectively than the forest floor, resulting in temperatures which are closer to each other.

The forest has a significant effect on the wind field reduction, in particular, during weak flow. Below the canopy top, the diurnal variation is almost non-existent. In the clearing, the winds close to the ground do not exhibit a strong diurnal variation, except during January and December.

For an assessment of the mean stability characteristics of the forest site, values of the bulk gradient Richardson number were computed. A frequency distribution of the number of occurrences in each stability class was obtained. Nearly all the cases sampled for the above forest canopy during the moist, southwest monsoon period fell into the near-neutral classification. For the same layer in January, during the cool dry northeast monsoon, about 41% of the cases exhibited near-neutral conditions with slightly less than 10% falling in various of the unstable categories and slightly less than half falling in various of the stable categories. For the clearing, the lower layer exhibits a wider variation of stability than does the upper layer. Slightly less than 80% of the cases in June and about 70% of the cases in September show near-neutral stability in the upper layer of the clearing; evidence of the modifying influence of the surrounding forest.

For near neutral conditions in both monsoon periods, the winds in the microlayer above the forest canopy show a reasonable fit to a displaced logarithmic profile. The datum displacement height has an average value of about 27.6 meters but varies over a range of about 2(¼) meters from the northeast to southwest monsoon periods.

The roughness parameter for the canopy exhibits a strong seasonal variation with a mean value of 0.83 m for the January sample, 5.55 m for the June sample and 3.61 m for the September sample. The canopy stress has a mean value of 1.3 dynes-cm^{-2} for January and the much larger mean values of 21.6 dynes-cm^{-2} for June and 13.7 dynes-cm^{-2} for September.

A test was made for possible correlation between z_0 and d with wind speed at the top of the tower (46 m). The roughness parameter was found to be an increasing function of wind speed and the datum displacement height a decreasing function of wind speed. Both parameters correlate best with the wind speed near the canopy (i.e. u(32)), but the correlation between d and u(46) is also significant at the 5% level of significance.

APPENDIX A

Present "D" Tapes Status

Present "D" Tapes Status

In this section a report is provided on the present status of the TREND "D" data tapes at the University of Maryland.

All the tapes at our disposal are copies of the original tapes taken at the Thailand forest site. The entire set is comprised of two types of tapes: 1) digital tapes ("D" tapes) - containing information about temperature and wind velocity, measured every 10 seconds 2) analog tapes ("A" tapes) - containing information about radiation, humidity and wind direction, measured every 30 seconds. Part of the "D" tapes were reduced and packed in binary. A "Users Manual" explaining how to use the repacked binary tapes is in preparation.

In Table A1 the numerical code of the packed tapes and the corresponding final product are presented.

Table A1

No.	Packed "D" Tapes
240	237, 238, 240, 241, 243
275	273, 274, 275, 277, 278
287	285, 286, 287, 288, 290
293	291, 292, 293, 295, 296
301	298, 299, 301, 302, 304
308	305, 306, 308, 309, 310
316	312, 314, 316, 317, 318
331	328, 330, 331, 333, 334
338	335, 337, 338, 340, 341
354	351, 352, 354, 355, 356
363	363, 365, 366, 367, 369
374	
380	377, 378, 380, 381, 383
395	393, 394, 395, 397, 398

In Table A2 the conditions and dates covered by each of the reduced tapes are indicated. It is evident from Table A2 that the useful information retrieved from the raw data is not continuous, but rather in stretches of approximately two weeks length.

TABLE A2

"D" Data Tapes

	Dates	Remarks
240	Sept. 25 - Oct. 8, 1969	99% good scans
275	Dec. 1 - Dec. 12, 1969	good
287	Dec. 26. - Jan. 8, 1970	good
283	Jan. 8 - Jan. 19, 1970	very good
301	Jan. 19 - Feb. 15, 1970	good (gap in data for Jan. 21 - Feb. 5, 1970)
308	Feb. 15 - Feb. 28, 1970	very good
316	Feb. 28 - March 14, 1970	good
331	April 6 - April 20, 1970	very good
338	April 20 - May 5, 1970	good
354	May 24 - June 6, 1970	80% good
363	June 19 - July 2, 1970	99% good
374	July 2 - July 24, 1970	very good
380	July 24 - August 11, 1970	?
395	August 29 - Sept. 13, 1970	75% good

Additional "D" tapes are at our disposal. These tapes were not yet reduced because of the cost involved. Approximately, 105 tapes were not reduced.

APPENDIX B

Description of the condensed data tape

From the overwhelming data base at our disposal, a "working" data set was prepared. This unit consists of half hourly averaged data obtained from the densely packed binary tapes of the ten second data. These half hourly averages were obtained for various periods of the monsoon cycle, for about two weeks each. Since the reduction process was time consuming and expensive, this useful set of data was stored on a separate tape.

From the half hourly data base described previously, two week averages were obtained. These are also stored on the same tape.

In this section, information about the tape content, and format will be presented.

Instructions for condensed tape users.

This 9-track tape (internal tape Number P10629) contains 170 files, each of which contain wind speed and temperature data. The tape is unlabled and contains fieldata code character representation with a storage density of 6250 bpi.

Each file is 2 blocks long with the first file starting at the load point of the tape.

To access any file the following procedure is suggested for use on Univac 1100 operating system:

Assign the tape:

```
@ASG,TJ TAPE,U9S,p10629
```

Assign an alternate mass storage file, NORMAL CONVENTIONS:

```
@ASG FILE
```

Move the tape to the desired file;(refer to list):

```
@MOVE tape., File #
```

Copy the tape file to the mass storage file:

```
@COPY Tape.,File
```

After the copy is produced the tape will be positioned at the beginning of the next file (after the EOF mark). Care must be taken to ensure you don't @MOVE past the end of the tape.

Now the mass storage file can be used as a standard Univac data file.

The file will consist of 48 records each of which is a ½ hourly average (240 cards total); i.e., 5 cards per record:

1 - Date and time

2,3,4 - 21 temperature levels

5 - 8 velocity levels

First will come the clearing tower (CT) data followed by the forest tower (FT) data.

Card Formats:

In general the card format will be as follows

```
I4,4X,I3,1X,2I2/10(F6.2,1X)/10(F6.2,1X)/F6.2/8(F5.2,1X)
```

when noted by ('*') the card format will be

```
3(3(I2,1X),1X)/10F(6.2,1X)/10(F6.2,1X)/F6.2/8(F5.2,1X)
```

(the only difference being in the date format).

The following list describes the content of each file stored on the tape. All the data stored are for 1970 except December (1969).

File #	Contents	
a) The approximately two week averaged data		
0	Dec. Avg. CT	
1	Jan. Avg. CT *	
2	Feb. Avg. CT	
3	Apr. Avg. CT	
4	Jun. Avg. CT	
5	Jul. Avg. CT	
6	Sep. Avg. CT	
7	Dec. Avg. FT	
8	Jan. Avg. FT *	
9	Feb. Avg. FT	
10	Apr. Avg. FT	
11	Jun. Avg. FT	
12	Jul. Avg. FT	
13	Sep. Avg. FT	
b) The ½ hourly averaged data for single days	(Julian date)	
14-16	336-338 CT	
17-21	341-345 CT	
22-24	336-338 FT	
25-29	341-345 FT	
30-44	4-18 CT	(4-8*)
45-59	4-18 FT	(4-8*)
60-71	47-58 CT	
72-83	47-58 FT	
84-85	97-98 CT	
86-95	100-109 CT	
96-97	97-98 FT	
98-107	100-109 FT	
108-116	171-179 CT	
117-118	181-182 CT	
119-127	171-179 FT	
128-129	181-182 FT	
130-131	183-184 CT	
132-136	186-190 CT	
137-141	200-204 CT	
142-143	183-184 FT	
144-148	186-190 FT	
149-153	200-204 FT	
154	224 FT	
155	224 CT	
156	247 CT	
157-162	249-254 CT	
163	247 FT	
164-169	249-254 FT	

Information about missing data

Several profiles during various periods of time were missing. In order to obtain a complete set of data, consisting of 48 half hourly profiles for each day, limited editing was exercised. The following procedure was followed. Each missing profile was replaced by a profile from a complete day, when there was a good agreement between the data preceeding and following the missing profile.

The following list presents a full documentation of the data that were supplemented.

The replaced data in the files are as follows:

Missing			Replaced by			Where
Day	Year	Time	Day	Year	Time	CT&FT
338	1969	10:00	338	1969	10:30	FT&CT
342	1969	20:00	342	1969	20:30	FT&CT
345	1969	8:00	345	1969	7:30	FT&CT
345	1969	8:30	345	1969	9:00	FT&CT
7	1970	15:00-16:30	8	1970	15:00-16:30	FT&CT
11	1970	3:00- 6:30	11	1970	2:30,2:30, 2:30,2:30, 7:00,7:00, 7:00,7:00	FT&CT
175	1970	0:00		1970		CT
177	1970	7:00	177	1970	6:00	CT
178	1970	11:30	178	1970	11:00	CT&FT
181	1970	0:00	179	1970	23:30	CT&FT
183		9:30	180	1970	9:30	FT
186		0:00- 1:30	185	1970	0:00- 1:30	FT
187		18:00-23:30	186	1970	18:00-23:30	FT
188		0:00-13:00	187	1970	0:00-13:00	FT
200		13:30-16:00	201	1970	13:30-16:00	FT
202		12:00-18:30	201	1970	12:00-18:30	FT
204		8:30	208	1970	8:30	FT
247		14:30-16:00	253	1970	14:30-16:00	CT
250		23:00	246	1970	23:00	CT
252		20:00-21:30	254	1970	20:00-21:30	CT
247		14:30-16:00	251	1970	14:30-16:00	FT
250		23:00	252	1970	23:00	FT
253		20:00-21:30	254	1970	20:00-21:30	FT

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Month	T	R. H.	Teff	Hours sun-shine	Hours day-light	Precipa-tation (mm)		Evapora-tion (mm)		U	$\Delta U/\Delta t$	A*
	(°C)	(%)	(°C)			Total	Daily	Total	Daily	(mm)	(mm)	
1	22.65	69.07	21.00	7.20	11.33	11.4	0.37	124.9	3.94	30.2	1.0	-112.6
2	25.12	63.67	22.87	8.03	11.67	4.1	0.16	177.8	5.33	31.5	1.3	-172.4
3	27.46	67.27	24.93	7.27	12.03	82.5	2.67	194.2	6.27	38.9	7.4	-104.3
4	26.60	73.40	24.60	6.97	12.47	116.4	3.90	168.3	5.61	40.3	1.4	-505.0
5	26.77	78.63	25.10	6.00	12.83	171.6	5.57	145.7	4.70	43.6	3.3	29.2
6	26.48	81.33	25.10	4.70	13.00	122.3	4.03	125.6	4.19	48.2	4.6	1.3
7	26.09	80.33	24.77	4.70	12.93	77.8	2.43	133.0	4.29	46.6	-1.6	-56.8
8	25.82	79.90	24.40	5.07	12.63	122.2	3.90	115.4	3.77	45.6	-1.0	5.8
9	25.19	82.20	24.13	4.80	12.22	252.2	8.70	92.9	3.10	42.6	-3.0	156.3
10	23.98	85.00	23.00	5.80	11.82	120.4	3.90	90.2	2.75	41.0	-1.6	28.6
11	22.90	81.43	21.80	6.83	11.43	51.6	1.70	101.2	3.38	36.9	-4.1	-53.7
12	21.48	71.53	20.00	7.70	11.25	0.0	0.00	133.5	4.31	29.2	-7.7	-141.2
Avg.	25.0	76.2	23.5	6.3	12.1	94.4	3.11	133.6	4.30	39.6	0.0	-39.2
Total						1132.5		1602.7			0.0	-470.2

*Residual of Average Values: $\bar{P} - \bar{E} + (\Delta\bar{U}/\Delta t)$

Table 1 Monthly average values of climatological elements at the Thailand forest experimental site. (1967-1970)

Period (in 1970)	Level m	CT		FT	
		Vel. m/sec	v_1/v_2	Vel. m/sec	v_1/v_2
December (1969)	46 32	5.73 4.00	1.43	3.50 0.67	5.22
January	46 32	2.84 2.42	1.17	2.200 0.566	3.88
February	46 32	6.47 5.47	1.18	4.84 2.25	2.15
April	46 32	4.75 4.06	1.17	3.63 1.51	2.40
July	46 32	6.49 5.67	1.14	4.70 2.13	2.2
September	46 32	5.16 4.77	1.08	3.93 1.73	2.27

Table 2. Two-week averaged wind velocities at selected levels (V_1 - the 46 m level V_2 - the 32 m level)

Period No. of Convergent Cases	$\bar{z}_o$ (m) [σ_{z_o} (m)]	$\bar{d}$(m) [σ_d(m)]	$\bar{u}_*$(m-s^{-1}) [σ_{u_*} (m-s^{-1})]	$\tau(\bar{u}_*)$ (dynes cm^{-2})
January 8-10,1970 40 cases	0.83 [0.47]	29.53 [0.05]	0.33 [0.09]	1.31
June 20-26,1970(A) 201 cases	5.48 [1.66]	27.18 [0.69]	1.42 [0.45]	24.2
June 20-26,1970(B) 72 cases	5.62 [1.77]	27.16 [0.72]	1.26 [0.45]	19.1
Sept. 9-10, 1970 67 cases	3.61 [1.10]	28.09 [0.75]	1.07 [0.48]	13.7
July 19-23, 1970 108 cases	4.25 [.89]	27.49 [.47]	1.20 [.43]	17.28
August 11-13, 1970 68 cases	5.41 [1.9]	27.67 [.85]	1.41 [.48]	23.86
Average (weighted by No. of cases)	4.69	27.58	1.21	18.97

Table 3. Average values and standard deviations of roughness parameter, datum displacement height, friction velocity and canopy stress for the Sakaerat Forest.

Y	X	$\bar{Y}$	σ_y	$\bar{X}$	σ_x	A	B	R (Correlation)	F ratio	Standard Error of Estimate
UNITS	→	[Y]	[Y]	[cm-sec^{-1}]	[cm-sec^{-1}]	[Y]	[Y/X]			[Y]
z_o(cm)	u(46)	466	214	429	139	79.3	0.900	0.586	200	173.5
z_o(cm)	u(32)	466	214	181	78	147.4	1.758	0.639	263*	164.8
d(cm)	u(46)	2761	102	429	139	2968	-0.483	0.659	293*	770
d(cm)	u(32)	2761	102	181	78	2945	-1.017	0.774	568*	649
ln[z_o(cm)]	u(46)	5.968	0.708	429	139	4.645	0.00308	0.607	223	0.563
ln[z_o(cm)]	u(32)	5.968	0.708	181	78	4.808	0.00641	0.704	374*	0.504
ln[d(cm)]	u(46)	7.923	0.037	429	139	7.997	-0.00017	0.656	289*	0.028
ln[d(cm)]	u(32)	7.923	0.037	181	78	7.988	-0.00036	0.770	556*	0.024

* Significant at the 5% level.

Table 5. Correlation and regression statistics for 384 cases of 30-minute averaged wind profiles in January, June and September above the Thailand Forest. [Y = A + BX]

APPENDIX C

Listing of selected data

The data presented in this section represent the following two week averages:

December (1969), January, April, June,

July, September (1970)

The data are presented first for the forest and then for the clearing in the following format:

a) average wind speeds at eight levels*

b) average temperatures at fifteen levels above the surface*

c) average temperatures at six levels - surface and subsurface

*For details about the location of the various levels see Fig. 3

AVERAGE WIND SPEED (M/SEC) - CLEARING TOWER

JANUARY 1970, 8 - LEVELS: 46,32,24,16,8,4,2,1. (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	2.79	2.43	1.57	1.37	0.77	0.72	0.51	0.55
0030	2.72	2.31	1.71	1.25	0.70	0.65	0.42	0.49
0100	[illegible]	2.32	1.80	1.37	0.78	0.70	0.48	0.55
0130	[illegible]	2.33	1.76	1.36	0.75	0.72	0.47	0.55
0200	2.36	2.41	1.77	1.34	0.79	0.68	0.46	0.60
0230	2.22	2.33	1.70	1.38	0.67	0.67	0.44	0.58
0300	[illegible]	2.32	1.72	1.40	0.67	0.65	0.46	0.58
0330	2.22	2.19	1.55	1.31	0.67	0.70	0.51	0.61
0400	2.65	2.10	1.55	1.26	0.70	0.74	0.51	0.59
0430	2.71	2.14	1.60	1.30	0.68	0.69	0.49	0.56
0500	2.90	2.28	1.66	1.32	0.67	0.69	0.45	0.57
0530	2.85	2.35	1.68	1.34	0.69	0.62	0.46	0.54
0600	2.87	2.33	1.68	1.42	0.75	0.63	0.52	0.59
0630	2.90	2.34	1.63	1.40	0.81	0.76	0.55	0.61
0700	2.84	2.37	1.76	1.51	0.91	0.79	0.58	0.59
0730	2.83	2.41	1.76	1.73	0.97	1.05	0.79	0.73
0800	2.73	2.41	1.82	1.86	1.05	1.27	1.07	0.98
0830	2.73	2.46	1.87	1.96	1.11	1.37	1.15	1.06
0900	2.63	2.39	1.70	1.95	1.05	1.45	1.27	1.17
0930	2.90	2.67	1.87	2.18	1.17	1.57	1.36	1.26
1000	2.90	2.69	1.96	2.23	1.30	1.67	1.47	1.35
1030	3.05	2.92	2.00	2.34	1.38	1.77	1.58	1.44
1100	3.22	3.02	2.12	2.52	1.47	1.93	1.71	1.56
1130	3.24	2.96	1.96	2.42	1.50	1.84	1.64	1.52
1200	3.34	3.03	2.04	2.52	1.55	1.91	1.69	1.56
1230	3.43	3.13	1.98	2.52	1.52	1.94	1.73	1.60
1300	3.26	2.78	1.94	2.44	1.44	1.84	1.64	1.51
1330	2.94	2.69	1.84	2.23	1.28	1.74	1.54	1.43
1400	2.76	2.71	1.81	2.21	1.18	1.66	1.46	1.36
1430	2.45	2.20	1.57	1.76	1.08	1.43	1.27	1.19
1500	2.73	2.48	2.04	1.93	1.25	1.53	1.33	1.23
1530	2.66	2.43	2.02	1.72	1.10	1.31	1.12	1.04
1600	2.64	2.31	1.90	1.68	0.99	1.15	0.97	0.90
1630	2.65	2.29	1.86	1.48	0.87	0.85	0.71	0.66
1700	2.69	2.29	1.78	1.39	0.73	0.59	0.50	0.44
1730	2.78	2.26	1.67	1.17	0.60	0.42	0.40	0.36
1800	2.96	2.41	1.79	1.24	0.62	0.51	0.41	0.38
1830	2.80	2.19	1.59	1.17	0.64	0.42	0.39	0.39
1900	3.04	2.45	1.78	1.35	0.72	0.60	0.49	0.46
1930	2.95	2.41	1.64	1.36	0.69	0.55	0.41	0.44
2000	2.80	2.20	1.41	1.26	0.69	0.51	0.40	0.40
2030	2.67	2.12	1.34	1.11	0.60	0.43	0.37	0.40
2100	2.65	2.02	1.27	1.03	0.54	0.40	0.35	0.41
2130	2.71	2.12	1.46	1.11	0.64	0.48	0.40	0.48
2200	2.78	2.25	1.63	1.10	0.64	0.49	0.38	0.47
2230	2.90	2.34	1.74	1.19	0.68	0.58	0.47	0.51
2300	2.91	2.37	1.73	1.28	0.74	0.71	0.50	0.58
2330	2.96	2.24	1.69	1.21	0.71	0.70	0.45	0.53

AVERAGE TEMPERATURES (C) - CLEARING TOWER

JANUARY 1970, 15 - LEVELS: 46,40,36,32,28,24,20,16,12,8,6,4,2,0.5. (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	21.02	20.95	20.75	20.90	20.63	20.86	20.67	20.62	20.45	20.19	19.98	19.63	18.79	18.30	18.01
0030	21.37	20.93	20.71	20.70	20.59	20.70	20.57	20.51	20.36	20.11	19.90	19.56	18.75	18.21	17.84
0100	20.70	20.66	20.65	20.54	20.41	20.56	20.44	20.39	20.24	19.99	19.79	19.49	18.67	18.13	17.78
0130	20.35	20.51	20.51	20.24	20.24	20.42	20.30	20.26	20.17	19.88	19.66	19.32	18.52	17.99	17.67
0200	20.40	20.77	20.38	20.25	20.13	20.20	20.16	20.12	19.98	19.78	19.59	19.27	18.48	17.95	17.60
0230	20.24	20.72	20.23	20.14	20.01	20.04	20.05	20.00	19.68	19.69	19.53	19.28	18.50	17.91	17.51
0300	20.02	19.95	20.31	19.91	19.77	19.91	19.80	19.73	19.59	19.42	19.27	19.03	18.30	17.70	17.25
0330	20.02	19.99	20.01	19.91	19.77	19.91	19.80	19.73	19.59	19.42	19.16	18.87	18.11	17.61	17.26
0400	19.70	19.67	19.69	19.54	19.38	19.64	19.49	19.42	19.30	19.10	18.94	18.68	17.93	17.43	17.11
0430	19.52	19.56	19.50	19.27	19.09	19.37	19.29	19.22	19.10	18.87	18.69	18.38	17.66	17.26	16.98
0500	19.42	19.36	19.39	19.19	19.06	19.26	19.19	19.13	19.01	18.79	18.60	18.32	17.68	17.35	16.96
0530	19.17	19.15	19.16	19.09	17.31	19.06	18.99	18.94	18.82	18.65	18.49	18.22	17.59	17.16	16.89
0600	19.01	18.76	18.79	18.70	18.67	18.72	18.64	18.60	18.50	18.34	18.20	17.97	17.38	16.97	16.75
0630	19.00	18.59	18.61	18.54	18.50	18.56	18.51	18.45	18.33	18.17	18.05	17.82	17.31	16.95	16.74
0700	18.40	18.46	18.43	18.62	18.71	18.52	18.58	18.49	18.44	18.26	18.11	17.77	17.26	16.95	16.84
0730	18.47	18.59	18.02	18.88	19.04	18.70	18.86	18.73	18.78	18.70	18.76	18.82	18.80	18.43	18.20
0800	18.72	18.95	18.87	19.29	19.52	18.99	19.20	19.07	19.15	19.12	19.25	19.52	20.31	20.35	20.14
0830	18.96	19.10	19.12	19.53	19.75	19.28	19.48	19.38	19.50	19.49	19.67	20.01	20.92	21.12	21.11
0900	19.39	19.60	19.56	20.02	20.24	19.76	19.99	19.89	20.03	20.03	20.24	20.64	21.66	22.00	22.09
0930	19.76	19.92	19.96	20.29	20.50	20.17	20.40	20.34	20.50	20.54	20.77	21.18	22.14	22.57	51.35
1000	20.27	20.42	20.48	20.78	20.98	20.67	20.94	20.88	21.05	21.12	21.36	21.78	22.73	23.25	23.62
1030	21.07	21.23	21.10	21.37	21.60	21.30	21.59	21.54	21.73	21.81	22.07	22.51	23.47	24.09	24.46
1100	21.31	21.50	21.54	21.79	22.01	21.74	22.01	22.01	22.18	22.28	22.53	22.97	23.85	24.53	24.96
1130	21.35	22.02	22.04	22.33	22.59	22.26	22.55	22.58	22.76	22.87	23.11	23.54	24.40	25.09	25.53
1200	22.28	22.45	22.49	22.77	23.01	22.75	22.99	23.05	23.23	23.37	23.62	24.02	24.79	25.49	25.98
1230	22.67	22.80	22.38	23.15	23.39	23.17	23.37	23.47	23.65	23.80	24.04	24.42	25.14	25.82	26.34
1300	22.97	23.12	23.18	23.50	23.77	23.44	23.65	23.71	23.88	24.03	24.25	24.61	25.32	25.91	26.35
1330	23.29	23.45	23.48	23.91	24.06	23.71	23.91	23.96	24.11	24.23	24.43	24.77	25.42	25.95	26.29
1400	23.50	23.65	23.74	24.00	24.27	23.91	23.95	23.91	24.04	24.15	24.45	24.75	25.33	25.80	26.08
1430	23.91	24.05	24.08	24.78	24.64	24.20	24.45	24.50	24.61	24.71	24.86	25.14	25.71	26.09	26.28
1500	24.06	24.16	24.21	24.49	24.70	24.40	24.56	24.61	24.72	24.82	24.97	25.24	25.77	26.12	26.31
1530	24.17	24.24	24.28	24.58	24.77	24.40	24.59	24.64	24.73	24.82	24.96	25.20	25.71	25.91	26.11
1600	24.11	24.20	24.21	24.43	24.58	24.36	24.46	24.51	24.59	24.64	24.75	24.95	25.38	25.58	25.66
1630	23.95	24.03	24.02	24.22	24.33	24.13	24.18	24.22	24.24	24.28	24.34	24.47	24.78	24.93	24.93
1700	23.60	23.84	23.83	23.92	23.99	23.87	23.86	23.87	23.84	23.82	23.83	23.86	23.97	23.96	23.92
1730	23.51	23.51	23.49	23.52	23.51	23.42	23.34	23.32	23.22	23.13	23.05	22.91	22.62	22.30	22.18
1800	23.18	23.12	23.12	22.98	22.89	22.93	22.75	22.69	22.55	22.37	22.23	21.93	21.32	20.91	20.77
1830	22.96	22.92	22.92	22.75	22.67	22.76	22.58	22.54	22.37	22.14	21.95	21.60	20.83	20.38	20.22
1900	22.66	22.61	22.60	22.52	22.38	22.40	22.30	22.25	22.10	21.89	21.72	21.43	20.73	20.29	20.04
1930	22.32	22.28	22.23	22.19	22.05	22.17	22.01	21.98	21.84	21.65	21.51	21.22	20.43	19.98	19.71
2000	22.20	22.17	22.16	22.03	21.90	22.06	21.90	21.87	21.73	21.53	21.37	21.02	20.14	19.70	19.43
2030	22.10	22.03	22.03	21.90	21.74	21.91	21.77	21.74	21.61	21.40	21.22	20.86	19.98	19.46	19.15
2100	22.02	21.95	21.95	21.82	21.64	20.11	21.67	21.62	21.48	21.27	21.09	20.74	19.88	19.34	18.98
2130	21.77	21.73	21.71	21.40	21.44	21.56	21.44	21.39	21.25	21.04	20.88	20.58	19.78	19.28	19.00
2200	21.34	21.47	21.49	21.77	21.21	21.35	21.22	21.17	21.03	20.82	20.65	20.31	19.54	19.12	18.86
2230	21.42	21.40	21.40	21.27	21.13	21.26	21.14	21.09	20.94	20.71	20.53	20.18	19.34	18.87	18.75
2300	21.47	21.31	21.32	21.20	21.07	21.13	21.05	20.99	20.85	20.63	20.43	20.04	19.16	18.68	18.39
2330	21.20	21.13	21.14	21.07	20.74	20.79	20.86	20.91	20.66	20.43	20.22	19.82	18.94	18.42	18.14

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW CLEARING TOWER

JANUARY 1970, 6 - LEVELS: 0,5,10,20,50,100. (IN CM)

L.S.T.	16	17	18	19	20	21
0000	19.71	19.65	20.73	21.58	21.96	21.92
0030	19.57	19.75	20.66	21.50	21.91	21.92
0100	19.50	19.65	20.58	21.43	21.92	21.92
0130	19.46	19.57	20.51	21.35	21.92	21.92
0200	19.32	19.48	20.45	21.28	21.93	21.92
0230	19.23	19.41	20.39	21.21	21.93	21.92
0300	19.16	19.34	20.34	21.15	21.93	21.93
0330	19.06	19.25	20.26	21.05	21.91	21.92
0400	18.97	19.17	20.20	21.02	21.91	21.92
0430	18.84	19.07	20.14	20.93	21.91	21.92
0500	18.81	19.00	20.08	20.87	21.90	21.92
0530	18.77	18.96	20.03	20.81	21.90	21.92
0600	18.71	18.92	19.98	20.75	21.90	21.92
0630	18.63	18.68	19.94	20.70	21.90	21.92
0700	18.76	18.89	19.90	20.66	21.91	21.92
0730	18.75	18.83	19.75	20.50	21.87	21.92
0800	19.07	19.06	19.77	20.46	21.86	21.92
0830	19.41	19.36	19.84	20.44	21.86	21.92
0900	19.78	19.63	19.84	20.37	21.83	21.92
0930	77.51	34.38	34.27	34.69	93.25	21.93
1000	20.99	20.60	20.16	20.47	21.82	21.93
1030	21.70	21.19	20.37	20.58	21.81	21.93
1100	22.42	21.76	20.54	20.72	21.80	21.93
1130	23.12	22.27	20.70	20.89	21.79	21.93
1200	22.75	22.76	20.85	21.05	21.79	21.93
1230	22.95	23.14	21.06	21.18	21.78	21.93
1300	23.56	23.14	21.31	21.32	21.77	21.93
1330	24.15	22.99	21.52	21.49	21.77	21.93
1400	24.30	23.09	21.96	21.85	21.94	21.93
1430	24.59	23.29	22.03	22.04	21.84	21.94
1500	24.59	23.36	22.15	22.20	21.84	21.94
1530	24.46	23.32	22.24	22.34	21.84	21.94
1600	24.20	23.05	22.29	22.34	19.81	21.94
1630	23.85	22.98	22.29	22.54	21.84	21.94
1700	23.45	22.76	22.28	22.60	21.85	21.94
1730	22.94	22.43	22.22	22.63	21.86	21.94
1800	22.46	22.16	22.13	22.63	21.87	21.94
1830	22.10	21.87	22.01	22.59	21.88	21.94
1900	21.80	21.63	21.89	22.54	21.89	21.94
1930	21.33	21.28	21.67	22.39	21.85	21.93
2000	21.15	21.09	21.56	22.31	21.87	21.93
2030	20.74	20.91	21.46	22.23	21.86	21.94
2100	20.77	20.76	21.36	22.15	21.89	21.94
2130	20.63	20.64	21.27	22.07	21.90	21.94
2200	20.47	20.53	21.19	21.99	21.92	21.94
2230	20.31	20.40	21.11	21.91	21.93	21.94
2300	20.16	20.25	21.03	21.84	21.94	21.94
2330	20.01	20.15	20.95	21.76	21.95	21.94

AVERAGE WIND SPEED (M/SEC) - CLEARING TOWER

February 1970. 8 - LEVELS: 46,32,24,16,8,4,2,1, (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	7.47	6.21	5.37	4.23	3.25	2.87	2.49	2.09
0030	7.36	6.13	5.32	4.08	3.10	2.69	2.37	1.97
0100	7.17	5.89	4.93	3.95	3.04	2.67	2.33	1.97
0130	7.19	5.95	4.95	3.99	3.03	2.62	2.28	1.92
0200	7.38	5.91	4.94	3.97	3.14	2.76	2.39	2.00
0230	7.56	6.24	5.18	4.15	3.24	2.84	2.48	2.07
0300	7.60	6.49	5.41	4.37	3.49	3.07	2.65	2.23
0330	7.77	6.68	5.69	4.53	3.64	3.22	2.81	2.35
0400	8.16	6.81	5.80	4.67	3.74	3.32	2.87	2.42
0430	8.25	6.84	5.79	4.60	3.69	3.30	2.87	2.40
0500	8.08	6.72	5.67	4.52	3.66	3.27	2.84	2.37
0530	7.79	6.43	5.43	4.31	3.46	3.14	2.74	2.29
0600	7.75	6.46	5.38	4.31	3.42	3.05	2.67	2.22
0630	7.87	6.49	5.48	4.33	3.49	3.04	2.67	2.23
0700	8.17	6.74	5.57	4.47	3.64	3.16	2.73	2.28
0730	7.91	6.58	5.62	4.43	3.63	3.16	2.76	2.32
0800	7.32	6.12	5.29	4.34	3.63	3.15	2.77	2.31
0830	6.67	5.66	4.85	3.98	3.44	3.02	2.65	2.26
0900	6.10	5.30	4.79	3.89	3.52	3.10	2.72	2.33
0930	6.03	5.27	4.83	4.08	3.66	3.24	2.90	2.48
1000	5.51	4.91	4.28	3.83	3.41	3.00	2.69	2.29
1030	5.19	4.69	4.19	3.74	3.27	2.89	2.58	2.17
1100	4.76	4.31	3.87	3.56	3.08	2.67	2.42	2.03
1130	4.51	4.05	3.56	3.32	2.88	2.52	2.28	1.91
1200	4.38	3.97	3.17	3.16	2.72	2.33	2.15	1.80
1230	4.35	3.93	3.11	3.21	2.79	2.41	2.23	1.88
1300	4.25	3.91	3.11	3.22	2.76	2.39	2.21	1.85
1330	4.19	3.76	3.01	3.06	2.65	2.29	2.12	1.79
1400	4.38	4.09	3.39	3.34	2.84	2.44	2.25	1.92
1430	4.53	4.04	3.58	3.26	2.80	2.39	2.18	1.82
1500	4.48	4.04	3.47	3.28	2.80	2.43	2.23	1.84
1530	[illegible]	4.36	3.69	3.48	2.95	2.53	2.29	1.90
1600	5.24	4.65	3.89	3.68	3.11	2.70	2.39	1.97
1630	4.99	4.36	3.55	3.41	2.88	2.52	2.26	1.88
1700	5.11	4.42	3.47	3.40	2.89	2.49	2.22	1.82
1730	5.60	4.76	3.66	3.46	2.89	2.49	2.19	1.79
1800	6.04	5.03	3.90	3.49	2.83	2.46	2.15	1.80
1830	6.21	5.11	3.77	3.38	2.71	2.35	2.09	1.72
1900	6.45	5.32	3.73	3.36	2.74	2.37	2.10	1.70
1930	6.70	5.48	3.93	3.38	2.81	2.47	2.16	1.78
2000	7.03	5.73	4.41	3.59	2.89	2.54	2.24	1.86
2030	7.06	5.91	4.50	3.76	2.98	2.64	2.31	1.91
2100	7.38	6.03	4.64	3.96	3.13	2.77	2.45	2.04
2130	7.42	5.18	4.96	4.05	3.20	2.82	2.47	2.08
2200	7.57	6.03	4.99	3.99	3.18	2.79	2.41	2.05
2230	[illegible]	6.17	4.79	4.07	3.21	2.85	2.49	2.11
2300	7.60	6.20	4.95	4.23	3.31	2.96	2.59	2.19
2330	7.62	6.29	4.97	4.23	3.42	3.00	2.65	2.20

AVERAGE TEMPERATURE (C) - CLEARING TOWER

February 1970, 15 - LEVELS: 46,40,36,32,28,24,20,16,12,8,6,4,2,0.5. (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	23.39	23.37	23.37	23.41	23.31	23.26	23.26	23.21	23.10	22.99	22.90	22.97	22.73	22.44	22.31
0030	23.30	23.26	23.25	23.28	23.18	23.11	23.11	23.05	22.95	22.85	22.71	22.81	22.57	22.31	22.16
0100	23.22	23.19	23.18	23.21	23.11	23.05	23.04	22.98	22.87	22.75	22.61	22.70	22.46	22.18	22.03
0130	23.02	22.98	22.97	23.00	22.93	22.85	22.82	22.76	22.65	22.54	22.44	22.48	22.25	21.99	21.84
0200	22.95	22.90	22.88	22.90	22.80	22.73	22.72	22.66	22.53	22.40	22.27	22.31	22.05	21.76	21.58
0230	22.81	22.78	22.77	22.79	22.69	22.62	22.62	22.56	22.44	22.35	22.15	22.27	22.02	21.75	21.59
0300	22.58	22.54	22.54	22.57	22.47	22.41	22.42	22.37	22.28	22.21	22.10	22.18	21.97	21.73	21.61
0330	22.35	22.32	22.32	22.34	22.25	22.17	22.21	22.16	22.07	22.00	21.92	21.97	21.76	21.52	21.38
0400	22.21	22.16	22.17	22.20	22.10	22.04	22.06	22.01	21.92	21.86	21.77	21.83	21.62	21.38	21.27
0430	22.05	22.02	22.01	22.04	21.95	21.89	21.90	21.86	21.76	21.70	21.67	21.67	21.48	21.27	21.16
0500	21.89	21.95	21.85	21.87	21.77	21.71	21.72	21.67	21.59	21.51	21.45	21.49	21.30	21.10	21.00
0530	21.79	21.75	21.74	21.77	21.67	21.61	21.62	21.57	21.48	21.40	21.32	21.35	21.13	20.91	20.81
0600	21.66	21.62	21.61	21.63	21.54	21.47	21.48	21.43	21.33	21.24	21.19	21.20	20.99	20.75	20.62
0630	21.62	21.58	21.57	21.59	21.49	21.41	21.42	21.37	21.26	21.16	21.08	21.10	20.89	20.67	20.56
0700	21.96	21.95	21.96	21.98	21.90	21.83	21.85	21.74	21.61	21.47	21.33	21.37	21.18	20.98	20.90
0730	22.21	22.26	22.33	22.34	22.31	22.27	22.39	22.30	22.29	22.19	22.35	22.18	22.05	21.86	21.76
0800	22.58	22.68	22.78	22.81	22.82	22.81	23.00	22.90	22.98	23.05	23.58	23.28	23.57	23.71	23.66
0830	23.14	23.29	23.41	23.45	23.49	23.52	23.78	23.67	23.81	23.97	24.68	24.31	24.76	25.08	25.12
0900	23.74	23.90	24.03	24.08	24.13	24.17	24.49	24.38	24.56	24.82	25.81	25.17	25.75	26.21	26.36
0930	24.31	24.47	24.60	24.66	24.72	24.76	25.07	25.00	25.18	25.53	26.56	25.85	26.47	26.97	27.27
1000	25.07	25.23	25.33	25.41	25.48	25.54	25.86	25.80	26.00	26.42	27.48	26.74	27.42	28.01	28.35
1030	25.77	25.94	26.05	26.10	26.16	26.23	26.57	26.52	26.74	27.27	28.42	27.54	28.24	28.91	29.28
1100	26.55	26.72	26.82	26.88	26.94	27.01	27.36	27.30	27.52	28.11	29.32	28.35	29.07	29.81	30.20
1130	27.18	27.33	27.44	27.52	27.58	27.65	27.98	27.95	28.18	28.78	30.09	29.00	29.68	30.44	30.80
1200	27.75	27.89	27.99	28.10	28.16	28.24	28.57	28.60	28.83	29.42	30.88	29.70	30.35	31.12	31.44
1230	28.30	28.43	28.51	28.61	28.66	28.75	29.05	29.07	29.30	29.88	31.45	30.12	30.70	31.49	31.88
1300	28.61	28.71	28.84	28.93	28.99	29.08	29.37	29.41	29.63	30.26	31.75	30.42	30.97	31.73	32.20
1330	28.92	29.03	29.15	29.24	29.30	29.37	29.65	29.69	29.91	30.68	32.04	30.68	31.14	31.87	32.31
1400	29.01	29.12	29.24	29.33	29.39	29.46	29.73	29.79	29.99	30.83	32.06	30.76	31.20	31.93	32.36
1430	29.06	29.16	29.28	29.37	29.47	29.47	29.77	29.76	29.94	30.73	31.93	30.63	31.04	31.67	32.02
1500	29.05	29.15	29.25	29.34	29.38	29.42	29.65	29.67	29.83	30.56	31.58	30.43	30.77	31.34	31.69
1530	28.92	29.01	29.10	29.19	29.21	29.23	29.46	29.47	29.61	30.25	31.25	30.15	30.43	30.87	31.25
1600	28.57	28.66	28.73	28.91	28.82	28.85	29.01	29.02	29.10	29.62	30.38	29.55	29.76	30.12	30.43
1630	28.30	28.37	28.44	28.52	28.51	28.51	28.65	28.64	28.70	29.12	29.74	29.06	29.21	29.49	29.72
1700	27.86	27.91	27.97	28.03	28.01	28.00	28.10	28.08	28.08	28.33	28.87	28.29	28.35	28.53	28.63
1730	27.43	27.47	27.51	27.57	27.52	27.49	27.55	27.52	27.48	27.56	27.96	27.55	27.51	27.51	27.54
1800	26.98	26.99	27.02	27.06	26.99	26.94	26.97	26.93	26.86	26.79	27.01	26.81	26.67	26.53	26.49
1830	26.62	26.61	26.62	26.65	26.56	26.50	26.59	26.45	26.34	26.14	26.23	26.21	26.01	25.78	25.66
1900	26.36	26.34	26.34	26.36	26.28	26.21	26.21	26.14	26.02	25.76	25.81	25.86	25.62	25.35	25.21
1930	26.07	26.06	26.06	26.09	25.99	25.93	25.93	25.87	25.76	25.52	25.55	25.62	25.38	25.11	24.96
2000	25.76	25.75	25.76	25.79	25.69	25.63	25.63	25.57	25.45	25.25	25.26	25.31	25.05	24.77	24.62
2030	25.27	25.26	25.28	25.31	25.22	25.16	25.17	25.11	25.01	24.83	24.81	24.87	24.63	24.35	24.19
2100	24.88	24.86	24.89	24.93	24.84	24.76	24.81	24.75	24.65	24.47	24.45	24.53	24.30	24.03	23.88
2130	24.61	24.61	24.61	24.65	24.56	24.50	24.52	24.45	24.36	24.19	24.17	24.26	24.03	23.78	23.64
2200	24.42	24.41	24.41	24.44	24.35	24.29	24.30	24.24	24.14	23.97	23.93	24.01	23.76	23.50	23.37
2230	24.23	24.22	24.22	24.25	24.16	24.10	24.12	24.06	23.96	23.81	23.76	23.85	23.62	23.38	23.25
2300	23.99	23.97	23.98	24.01	23.92	23.87	23.89	23.84	23.75	23.62	23.55	23.64	23.42	23.19	23.06
2330	23.76	23.75	23.76	23.79	23.70	23.65	23.64	23.61	23.51	23.38	23.34	23.40	23.20	22.97	22.86

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW CLEARING TOWER

February 1970, 6 - LEVELS: 0.5,10,20,50,100. (IN CM)

L.S.T.	16	17	18	19	20	21
0000	23.23	23.58	24.15	24.95	24.12	23.52
0030	23.37	23.44	24.04	24.85	24.13	23.52
0100	22.76	23.32	23.94	24.76	24.14	23.53
0130	22.63	23.21	23.85	24.67	24.15	23.53
0200	22.59	23.08	23.76	24.59	24.16	23.53
0230	22.57	22.97	23.67	24.50	24.16	23.53
0300	22.48	22.88	23.58	24.42	24.17	23.53
0330	22.37	22.78	23.50	24.34	24.17	23.53
0400	22.24	22.68	23.42	24.26	24.17	23.53
0430	22.13	22.57	23.33	24.18	24.17	23.54
0500	22.02	22.46	23.25	24.10	24.17	23.54
0530	21.91	22.36	23.17	24.02	24.17	23.54
0600	21.82	22.26	23.09	23.95	24.16	23.54
0630	21.73	22.17	23.01	23.87	24.16	23.54
0700	21.71	22.11	22.94	23.80	24.15	23.55
0730	21.79	22.14	22.88	23.72	24.15	23.55
0800	22.04	22.33	22.86	23.66	24.14	23.55
0830	22.45	22.69	22.90	23.61	24.13	23.55
0900	23.03	23.19	23.01	23.59	24.12	23.55
0930	23.90	23.78	23.19	23.61	24.12	23.55
1000	24.79	24.68	23.46	23.67	24.11	23.56
1030	25.57	25.27	23.82	23.77	24.10	23.56
1100	26.91	26.09	24.22	23.93	24.09	23.56
1130	27.96	26.81	24.53	24.12	24.08	23.56
1200	28.73	27.53	24.71	24.37	24.07	23.56
1230	29.20	28.17	24.87	24.62	24.06	23.57
1300	29.43	28.32	25.15	24.83	24.05	23.57
1330	29.49	27.98	25.58	25.07	24.04	23.57
1400	29.45	28.10	25.87	25.28	24.04	23.57
1430	29.68	28.44	26.15	25.53	24.03	23.57
1500	29.62	28.52	26.36	25.75	24.03	23.58
1530	29.27	28.39	26.51	25.94	24.03	23.58
1600	28.77	28.04	26.56	26.09	24.04	23.58
1630	28.33	27.68	26.53	26.19	24.04	23.58
1700	27.81	27.31	26.46	26.26	24.05	23.58
1730	27.24	26.92	26.33	26.29	24.06	23.59
1800	26.67	26.50	26.17	26.29	24.07	23.59
1830	26.16	26.10	25.98	26.25	24.09	23.59
1900	25.73	25.74	25.79	26.18	24.11	23.59
1930	25.39	25.44	25.60	26.10	24.13	23.59
2000	25.11	25.20	25.43	26.00	24.15	23.59
2030	24.84	24.97	25.27	25.90	24.17	23.59
2100	24.61	24.77	25.12	25.80	24.19	23.60
2130	24.40	24.59	24.98	25.69	24.21	23.60
2200	24.20	24.42	24.85	25.59	24.22	23.60
2230	24.04	24.27	24.73	25.49	24.24	23.60
2300	23.87	24.12	24.61	25.40	24.26	23.60
2330	23.72	24.09	24.51	25.31	24.27	23.60

AVERAGE WIND SPEED (M/SEC) - CLEARING TOWER

APRIL 197[illegible], 8 - LEVELS: 46,32,24,16,8,4,2,1. (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	5.45	4.55	3.58	3.65	2.39	2.10	1.81	1.57
0030	5.50	4.60	3.74	3.12	2.40	2.13	1.31	1.59
0100	5.32	4.44	3.51	2.92	2.28	2.00	1.66	1.49
0130	5.22	4.43	3.38	2.89	2.20	1.94	1.61	1.46
0200	5.60	4.62	3.55	3.04	2.34	2.09	1.73	1.55
0230	5.72	4.83	3.77	3.25	2.53	2.23	1.88	1.65
0300	5.92	4.96	3.85	3.34	2.60	2.34	1.94	1.72
0330	6.27	5.27	4.20	3.54	2.70	2.35	1.96	1.70
0400	6.70	5.51	4.34	3.70	2.95	2.58	2.17	1.98
0430	6.60	5.59	4.52	3.78	2.91	2.57	2.17	1.88
0500	6.43	5.33	4.31	3.56	2.70	2.36	1.97	1.71
0530	5.95	4.97	3.90	3.28	2.48	2.16	1.86	1.60
0600	5.57	4.66	3.64	3.12	2.30	2.06	1.73	1.51
0630	5.25	4.33	3.39	2.86	2.16	1.91	1.60	1.40
0700	4.54	3.79	2.86	2.54	1.91	1.68	1.41	1.19
0730	4.02	3.49	2.69	2.48	1.91	1.72	1.42	1.24
0800	3.55	3.46	2.68	2.55	1.99	1.82	1.58	1.31
0830	3.65	3.22	2.49	2.44	1.98	1.81	1.58	1.34
0900	3.77	3.43	2.71	2.66	2.21	1.95	1.76	1.50
0930	3.70	3.37	2.68	2.67	2.23	1.99	1.79	1.51
1000	3.60	3.32	2.62	2.67	2.24	2.04	1.85	1.55
1030	3.46	3.19	2.53	2.54	2.11	1.93	1.79	1.49
1100	3.43	3.18	2.56	2.54	2.06	1.89	1.73	1.46
1130	3.18	2.92	2.33	2.32	1.91	1.75	1.65	1.38
1200	3.31	3.03	2.39	2.41	2.02	1.82	1.68	1.41
1230	3.15	2.86	2.31	2.34	1.95	1.76	1.62	1.37
1300	3.03	2.79	2.29	2.34	1.92	1.72	1.63	1.36
1330	3.13	2.66	2.30	2.28	1.84	1.67	1.55	1.30
1400	3.23	2.90	2.29	2.26	1.68	1.57	1.48	1.24
1430	3.65	3.28	2.50	2.51	1.84	1.78	1.62	1.36
1500	4.27	3.84	2.74	2.87	2.16	1.99	1.79	1.52
1530	4.13	3.70	2.36	2.94	1.98	2.01	1.82	1.52
1600	3.63	3.25	2.37	2.47	1.82	1.74	1.56	1.30
1630	3.65	3.27	2.43	2.39	1.67	1.59	1.38	1.16
1700	3.79	3.34	2.46	2.40	1.69	1.63	1.43	1.18
1730	4.14	3.55	2.53	2.42	1.62	1.56	1.37	1.14
1800	4.57	3.93	2.78	2.56	1.68	1.60	1.39	1.15
1830	4.73	3.95	3.11	2.51	1.82	1.57	1.31	1.13
1900	4.36	4.01	3.01	2.52	1.80	1.55	1.31	1.13
1930	4.95	4.11	3.07	2.54	1.84	1.56	1.34	1.15
2000	5.49	4.56	3.54	3.01	2.29	1.96	1.63	1.44
2030	5.75	4.98	3.93	3.26	2.52	2.18	1.85	1.56
2100	5.90	4.92	3.96	3.23	2.48	2.17	1.83	1.54
2130	5.64	4.81	3.98	3.18	2.48	2.15	1.95	1.58
2200	6.00	4.97	4.00	3.23	2.61	2.29	1.95	1.65
2230	6.23	5.07	4.11	3.33	2.65	2.34	2.01	1.49
2300	5.91	4.97	4.02	3.30	2.65	2.30	1.79	1.67
2330	5.72	4.71	3.77	3.16	2.52	2.21	1.91	1.61

AVERAGE TEMPERATURE (C) - CLEARING TOWER

APRIL 1-[illegible], 15 - LEVELS: 4[illegible],40,36,32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	23.78	23.77	23.73	23.82	23.73	23.66	23.67	23.55	23.40	23.19	23.19	23.09	22.65	22.34	22.19
0030	23.56	23.57	23.57	23.42	23.53	23.47	23.44	23.37	23.22	23.03	23.02	22.92	22.49	22.16	22.00
0100	23.54	23.51	23.51	23.55	23.46	23.34	23.37	23.31	23.16	22.93	22.97	22.85	22.43	22.05	21.89
0130	23.38	23.36	23.34	23.40	23.31	23.24	23.24	23.18	23.02	22.78	22.85	22.77	22.43	22.07	21.89
0200	23.21	23.17	23.17	23.19	23.02	23.01	22.99	22.93	22.77	22.55	22.66	22.53	22.15	21.83	21.71
0230	23.15	23.11	23.11	23.13	23.05	22.97	22.93	22.87	22.72	22.51	22.56	22.45	22.08	21.77	21.65
0300	23.00	22.84	23.03	22.94	22.84	22.70	22.75	22.69	22.55	22.34	22.35	22.25	21.86	21.55	21.41
0330	22.83	22.82	22.81	22.86	22.76	22.70	22.67	22.63	22.48	22.27	22.24	22.20	21.84	21.49	21.34
0400	22.67	22.65	22.64	22.60	22.57	22.51	22.50	22.45	22.32	22.13	22.14	22.11	21.81	21.53	21.38
0430	22.59	22.57	22.55	22.57	22.50	22.44	22.43	22.39	22.25	22.06	22.12	22.06	21.74	21.45	21.27
0500	22.51	22.50	22.53	22.54	22.45	22.34	22.38	22.31	22.17	21.98	22.02	21.95	21.62	21.32	21.15
0530	22.31	22.31	22.31	22.36	22.27	22.21	22.20	22.14	22.01	21.84	21.88	21.84	21.56	21.25	21.08
0600	22.21	22.21	22.21	22.27	22.19	22.13	22.12	22.08	21.94	21.75	21.81	21.76	21.51	21.22	21.07
0630	22.31	22.34	22.38	22.43	22.36	22.32	22.34	22.28	22.21	22.00	22.09	21.98	21.70	21.40	21.26
0700	22.69	22.72	22.85	22.89	22.84	22.85	22.94	22.88	22.97	22.86	22.95	22.95	22.99	22.90	22.81
0730	23.14	23.22	23.38	23.41	23.38	23.42	23.61	23.54	23.75	23.79	23.95	23.98	24.35	24.33	24.53
0800	23.60	23.69	23.64	23.87	23.85	23.90	24.11	24.02	24.24	24.36	24.48	24.52	24.94	24.72	25.23
0830	24.26	24.42	24.37	24.57	24.55	24.63	24.94	24.78	25.08	25.25	25.39	25.44	25.91	25.45	26.26
0900	24.79	24.94	25.10	25.11	25.09	25.17	25.50	25.32	25.64	25.84	25.71	26.07	26.27	26.32	27.13
0930	25.33	25.47	25.62	25.65	25.63	25.73	26.03	25.90	26.20	26.49	26.33	26.69	26.85	27.31	27.98
1000	25.67	25.81	25.94	25.96	25.96	26.05	26.35	26.23	26.49	26.99	26.77	27.01	27.14	27.71	28.16
1030	26.27	26.34	26.47	26.51	26.44	26.56	26.84	26.77	26.98	27.67	27.32	27.46	27.69	28.32	28.50
1100	26.51	26.61	26.74	26.80	26.77	26.86	27.13	27.06	27.31	28.09	27.63	27.85	28.06	28.72	28.88
1130	27.02	27.13	27.25	27.30	27.27	27.34	27.67	27.57	27.87	28.55	28.16	28.38	28.68	29.33	29.40
1200	27.31	27.49	27.50	27.57	27.55	27.61	27.85	27.81	28.05	28.70	28.27	28.49	28.78	29.38	29.35
1230	27.52	27.69	27.68	27.74	27.71	27.80	28.03	28.00	28.21	28.80	28.41	28.69	28.89	29.50	29.37
1300	27.78	27.93	27.93	27.97	27.95	28.02	28.27	28.21	28.41	28.97	28.59	28.85	29.00	29.58	29.45
1330	27.92	28.09	28.11	28.16	28.14	28.18	28.43	28.39	28.58	29.09	28.75	28.97	29.16	29.65	29.66
1400	28.03	28.21	28.21	28.24	28.25	28.27	28.52	28.46	28.63	29.21	28.81	28.98	29.21	29.62	29.72
1430	27.90	27.93	27.95	27.99	27.99	28.02	28.22	28.17	28.32	28.92	28.47	28.63	28.85	29.19	29.37
1500	27.12	27.24	27.26	27.32	27.31	27.33	27.49	27.47	27.57	28.05	27.71	27.88	28.06	28.28	28.45
1530	27.04	27.17	27.15	27.21	27.17	27.20	27.37	27.32	27.39	27.92	27.49	27.65	27.81	27.93	28.22
1600	27.00	27.29	26.98	27.03	27.03	27.03	27.12	27.09	27.12	27.59	27.24	27.34	27.39	27.50	27.70
1630	26.54	26.75	26.90	26.96	26.92	26.91	26.98	26.94	26.95	27.37	27.02	27.10	27.14	27.20	27.29
1700	26.76	27.01	26.99	27.04	26.95	26.91	26.95	26.91	26.93	27.25	26.96	27.03	27.05	27.07	27.08
1730	26.58	26.89	26.82	26.93	26.93	26.77	26.78	26.75	26.69	26.91	26.63	26.63	26.51	26.44	26.38
1800	26.62	26.57	26.55	26.63	26.57	26.40	26.46	26.43	26.32	26.31	26.13	26.14	25.99	25.68	25.54
1830	26.56	26.45	26.47	26.51	26.38	26.29	26.22	26.16	25.97	25.71	25.72	25.63	25.31	24.98	24.75
1900	26.28	26.17	26.18	26.22	26.09	26.00	25.93	25.86	25.67	25.34	25.40	25.27	24.84	24.42	24.15
1930	26.16	26.07	26.06	26.08	25.94	25.84	25.73	25.71	25.52	25.16	25.26	25.10	24.58	24.08	23.79
2000	25.82	25.77	25.77	25.80	25.67	25.56	25.54	25.48	25.32	25.05	25.14	25.04	24.60	24.12	23.87
2030	25.40	25.36	25.35	25.39	25.24	25.21	25.19	25.14	25.00	24.88	24.86	24.78	24.40	24.03	23.86
2100	25.05	25.00	25.00	25.05	24.94	24.95	24.87	24.78	24.63	24.40	24.44	24.33	23.98	23.70	23.56
2130	24.79	24.76	24.77	24.90	24.79	24.62	24.61	24.56	24.41	24.16	24.25	24.16	23.85	23.57	23.44
2200	24.65	24.61	24.62	24.65	24.54	24.49	24.44	24.39	24.25	23.99	24.12	24.05	23.75	23.49	23.37
2230	24.54	24.50	24.51	24.54	24.44	24.37	24.36	24.29	24.14	23.87	24.01	23.94	23.64	23.36	23.24
2300	24.41	24.37	24.37	24.41	24.31	24.24	24.23	24.17	24.04	23.81	23.91	23.83	23.50	23.23	23.13
2330	24.16	24.15	24.15	24.15	24.02	24.01	23.97	23.94	23.77	23.59	23.66	23.54	23.13	22.85	22.75

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW CLEARING TOWER

APRIL 1970, 6 - LEVELS: 0.5,10,20,50,100. (IN CM)

L.S.T.	16	17	18	19	20	21
0000	24.[illegible]	24.47	25.10	25.54	25.43	25.35
0030	23.94	24.41	25.02	25.49	25.43	25.35
0100	23.30	24.34	24.94	25.42	25.43	25.35
0130	23.[illegible]	24.28	24.86	25.37	25.43	25.34
0200	23.72	24.21	24.81	25.31	25.43	25.34
0230	23.53	24.14	24.74	25.25	25.43	25.34
0300	23.44	24.01	24.66	25.20	25.43	25.33
0330	23.35	23.91	24.56	25.14	25.43	25.33
0400	23.33	23.85	24.48	25.07	25.43	25.34
0430	23.26	23.79	24.41	25.01	25.42	25.33
0500	23.15	23.71	24.34	24.95	25.42	25.33
0530	23.[illegible]	23.62	24.27	24.89	25.42	25.34
0600	23.[illegible]4	23.56	24.20	24.84	25.41	25.34
0630	23.03	23.52	24.14	24.78	25.40	25.33
0700	23.19	23.63	24.13	24.77	25.41	25.34
0730	23.36	23.75	24.07	24.67	25.40	25.35
0800	23.51	23.99	24.11	24.63	25.39	25.35
0830	23.90	24.25	24.20	24.62	25.38	25.35
0900	24.30	24.64	24.36	24.61	25.37	25.35
0930	24.37	25.16	24.65	24.63	25.36	25.35
1000	25.43	25.66	25.00	24.66	25.35	25.35
1030	25.97	26.15	25.37	24.73	25.34	25.35
1100	26.46	26.63	25.76	24.81	25.33	25.35
1130	27.[illegible]	27.08	26.12	24.91	25.32	25.35
1200	27.12	27.63	26.65	25.10	25.31	25.35
1230	27.3[illegible]	27.81	26.94	25.26	25.30	25.35
1300	27.59	27.94	27.22	25.44	25.29	25.35
1330	27.74	28.16	27.51	25.63	25.28	25.35
1400	27.70	28.37	27.76	25.79	25.26	25.35
1430	27.71	28.30	27.90	25.98	25.26	25.35
1500	27.36	27.81	27.87	26.13	25.27	25.35
1530	26.99	27.25	27.73	26.26	25.25	25.35
1600	26.76	26.94	27.47	26.31	25.27	25.35
1630	26.64	26.77	27.31	26.33	25.28	25.35
1700	26.50	26.60	27.14	26.33	25.29	25.35
1730	26.2[illegible]	26.43	26.98	26.33	25.30	25.35
1800	26.02	26.23	26.81	26.31	25.31	25.35
1830	25.74	26.03	26.63	26.29	25.32	25.35
1900	25.47	25.79	26.45	26.25	25.33	25.35
1930	25.[illegible]	25.62	26.29	26.20	25.35	25.35
2000	25.14	25.47	26.14	26.15	25.36	25.35
2030	24.99	25.35	26.01	26.09	25.37	25.35
2100	24.37	25.25	25.98	26.03	25.39	25.35
2130	24.75	25.14	25.76	25.96	25.40	25.35
2200	24.5[illegible]	25.05	25.66	25.90	25.41	25.35
2230	24.55	24.97	25.56	25.84	25.42	25.35
2300	24.47	24.89	25.47	25.79	25.42	25.35
2330	24.24	24.71	25.29	25.67	25.44	25.35

AVERAGE WIND SPEED (M/SEC) - CLEARING TOWER

JUNE 1970, 8 - LEVELS: 46,32,24,16,9,4,2,1, (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	[illegible]	6.03	5.16	4.35	3.63	3.20	2.77	2.27
0030	6.90	5.90	5.03	4.25	3.56	3.18	2.72	2.25
0100	[illegible]	5.86	4.98	4.18	3.44	3.05	2.57	2.15
0130	6.39	5.74	5.04	4.20	3.50	3.09	2.63	2.19
0200	6.76	5.81	4.91	4.18	3.50	3.12	2.59	2.21
0230	6.74	5.74	4.87	4.11	3.45	3.08	2.61	2.20
0300	6.57	5.63	4.73	4.00	3.31	2.94	2.46	2.10
0330	6.11	5.19	4.41	3.71	3.06	2.72	2.27	1.91
0400	6.05	5.14	4.35	3.67	3.05	2.71	2.31	1.90
0430	5.75	4.92	4.22	3.56	2.93	2.58	2.19	1.83
0500	5.83	5.01	4.21	3.59	2.92	2.60	2.23	1.86
0530	5.65	4.92	4.09	3.42	2.93	2.57	2.14	1.79
0600	5.31	4.54	3.87	3.35	2.82	2.50	2.08	1.77
0630	5.65	4.84	4.10	3.46	2.87	2.55	2.11	1.81
0700	5.00	4.19	3.50	2.99	2.51	2.25	1.89	1.66
0730	4.65	4.16	3.53	3.07	2.59	2.31	1.93	1.65
0800	4.68	4.13	3.58	3.10	2.64	2.36	2.03	1.72
0830	4.66	4.26	3.69	3.24	2.77	2.48	2.14	1.82
0900	5.22	4.70	4.12	3.62	3.08	2.76	2.37	1.99
0930	5.10	4.57	4.05	3.61	3.06	2.72	2.35	1.96
1000	4.85	4.29	3.81	3.33	2.83	2.54	2.18	1.83
1030	4.74	3.63	3.41	3.01	2.57	2.32	2.02	1.72
1100	4.88	4.23	3.73	3.29	2.77	2.48	2.14	1.79
1130	4.56	4.17	3.66	3.22	2.69	2.38	2.06	1.74
1200	4.77	4.28	3.77	3.31	2.80	2.47	2.06	1.79
1230	4.90	4.41	3.72	3.42	2.89	2.59	2.12	1.88
1300	4.37	4.01	3.51	3.09	2.60	2.31	1.98	1.70
1330	4.52	4.02	3.56	3.09	2.58	2.29	1.84	1.70
1400	4.63	4.18	3.63	3.15	2.65	2.35	1.88	1.74
1430	4.51	4.06	3.54	3.08	2.55	2.25	1.71	1.63
1500	4.61	4.17	3.68	3.20	2.67	2.35	1.83	1.71
1530	4.62	4.37	3.82	3.31	2.72	2.43	2.00	1.76
1600	5.12	4.57	4.02	3.46	2.90	2.58	2.19	1.82
1630	5.17	4.55	3.97	3.42	2.86	2.55	2.20	1.82
1700	5.54	4.91	4.21	3.64	3.04	2.71	2.32	1.91
1730	5.67	4.96	4.33	3.70	3.08	2.75	2.35	1.91
1800	6.16	5.71	4.58	3.85	3.18	2.79	2.39	1.96
1830	6.33	5.44	4.62	3.87	3.20	2.82	2.42	1.98
1900	6.43	5.52	4.67	3.93	3.23	2.85	2.43	2.00
1930	6.30	5.40	4.58	3.82	3.11	2.76	2.33	1.94
2000	6.29	5.35	4.53	3.80	3.15	2.77	2.34	1.95
2030	6.41	5.43	4.60	3.84	3.16	2.81	2.42	1.98
2100	6.91	[illegible]	5.01	4.13	3.34	2.96	2.55	2.09
2130	7.14	6.11	5.20	4.17	3.33	2.89	2.49	2.06
2200	6.92	5.97	5.09	4.13	3.23	2.91	2.41	2.00
2230	7.13	[illegible]	5.14	4.26	3.42	3.02	2.59	2.13
2300	[illegible]	[illegible]	5.14	4.30	3.35	2.96	2.55	2.12
2330	[illegible]	[illegible]	[illegible]	4.34	3.24	3.14	2.72	2.24

AVERAGE TEMPERATURES (C) - CLEARING TOWER

JUNE 1970, 15 - LEVELS: 45,40,36,32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

L...T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	22.74	22.76	22.79	22.95	22.60	22.78	22.84	22.80	22.79	22.74	22.83	22.87	22.79	22.77	22.70
0030	22.95	22.97	23.01	23.07	23.01	23.00	23.07	23.07	23.04	23.07	23.11	23.16	23.13	23.16	23.13
0100	22.47	22.48	22.51	22.56	22.52	22.49	22.53	22.43	22.45	22.42	22.48	22.51	22.42	22.41	22.33
0130	22.42	22.44	22.47	22.52	22.47	22.43	22.49	22.45	22.42	22.37	22.43	22.47	22.36	22.35	22.27
0200	22.37	22.35	22.39	22.44	22.40	22.30	22.42	22.37	22.34	22.29	22.35	22.39	22.28	22.25	22.15
0230	22.24	22.26	22.29	22.75	22.31	22.27	22.33	22.28	22.26	22.20	22.26	22.28	22.16	22.12	22.03
0300	22.17	22.18	22.20	22.25	22.21	22.17	22.23	22.19	22.17	22.12	22.19	22.22	22.11	22.08	21.99
0330	22.17	22.15	22.18	22.24	22.20	22.16	22.23	22.18	22.17	22.12	22.19	22.22	22.12	22.09	22.00
0400	22.11	22.12	22.14	22.20	22.15	22.13	22.18	22.14	22.12	22.09	22.15	22.19	22.10	22.08	22.00
0430	22.08	22.09	22.12	22.16	22.13	22.10	22.15	22.12	22.10	22.06	22.12	22.14	22.04	22.01	21.93
0500	22.07	22.09	22.13	22.18	22.13	22.11	22.15	22.11	22.07	22.03	22.08	22.11	22.00	21.98	21.90
0530	22.09	22.11	22.14	22.21	22.16	22.13	22.19	22.12	22.08	22.01	22.06	22.09	21.99	21.96	21.88
0600	22.16	22.17	22.22	22.24	22.24	22.21	22.26	22.22	22.18	22.12	22.17	22.18	22.07	22.05	21.97
0630	22.28	22.31	22.35	22.42	22.35	22.34	22.40	22.37	22.36	22.37	22.39	22.43	22.36	22.37	22.34
0700	22.64	22.48	22.74	22.81	22.72	22.71	22.79	22.85	22.80	22.89	22.86	22.91	22.92	22.97	23.01
0730	23.11	23.16	23.24	23.31	23.17	23.17	23.27	23.42	23.34	23.53	23.41	23.47	23.55	23.67	23.79
0800	23.74	23.78	23.89	23.96	23.76	23.77	23.90	24.14	24.02	24.34	24.12	24.20	24.39	24.57	24.79
0830	24.36	24.43	24.56	24.63	24.39	24.40	24.57	24.90	24.75	25.21	24.87	24.97	25.26	25.54	25.78
0900	24.55	24.62	24.75	24.82	24.60	24.66	24.80	25.11	24.98	25.43	25.11	25.24	25.52	25.86	26.17
0930	24.76	24.84	24.95	25.03	24.83	24.86	25.04	25.31	25.22	25.63	25.38	25.50	25.82	26.15	26.48
1000	25.11	25.16	25.32	25.36	25.11	25.15	25.33	25.64	25.50	25.95	25.66	25.77	26.09	26.44	26.79
1030	25.75	25.91	25.94	25.99	25.71	25.73	25.93	26.30	26.14	26.68	26.30	26.42	26.80	27.21	27.64
1100	25.80	25.96	25.78	26.0[illegible]	25.44	25.86	26.04	26.35	26.24	26.71	26.42	26.55	26.90	27.29	27.71
1130	26.09	26.13	26.24	26.32	26.10	26.12	26.31	26.63	26.51	27.00	26.70	26.83	27.18	27.60	28.01
1200	26.03	26.05	26.14	26.22	26.04	26.05	26.22	26.46	26.37	26.75	26.54	26.67	26.96	27.35	27.69
1230	26.28	26.25	26.31	26.38	26.23	26.24	26.40	26.60	26.54	26.95	26.70	26.83	27.10	27.52	27.82
1300	26.44	26.39	26.46	26.51	26.36	26.36	26.51	26.69	26.63	26.92	26.78	26.90	27.17	27.54	27.81
1330	26.78	26.70	26.79	26.95	26.71	26.73	26.91	27.09	27.04	27.37	27.23	27.36	27.64	28.04	28.36
1400	26.93	26.89	26.87	27.03	26.93	26.94	27.11	27.28	27.24	27.53	27.42	27.54	27.82	28.22	28.53
1430	26.51	26.48	26.57	26.42	26.50	26.47	26.62	26.77	26.71	27.02	26.84	26.95	27.16	27.48	27.75
1500	26.04	26.21	26.10	26.15	26.14	26.04	26.11	26.25	26.21	26.47	26.35	26.46	26.63	26.95	27.20
1530	25.90	25.97	25.93	25.98	25.37	25.85	25.93	26.05	26.00	26.19	26.11	26.20	26.37	26.63	26.84
1600	25.76	25.74	25.83	25.90	25.90	25.79	25.86	25.99	25.94	26.09	26.02	26.11	26.27	26.52	26.73
1630	25.50	25.51	25.59	25.47	25.58	25.59	25.65	25.75	25.71	25.80	25.79	25.87	25.96	26.14	26.34
1700	25.32	25.33	25.40	25.47	25.42	25.41	25.46	25.56	25.50	25.60	25.56	25.62	25.71	25.84	25.99
1730	25.02	25.04	25.12	25.16	25.11	25.10	25.16	25.21	25.15	25.23	25.20	25.25	25.26	25.36	25.45
1800	24.63	24.65	24.71	24.76	24.70	24.68	24.73	24.75	24.69	24.72	24.71	24.74	24.68	24.71	24.71
1830	24.29	24.30	24.37	24.32	24.37	24.30	24.33	24.30	24.25	24.19	24.22	24.24	24.13	24.10	24.02
1900	23.95	23.96	23.98	24.03	23.93	23.95	23.98	23.92	23.87	23.79	23.85	23.87	23.73	23.66	23.55
1930	23.74	23.74	23.77	23.91	23.76	23.73	23.76	23.70	23.65	23.57	23.63	23.64	23.49	23.42	23.29
2000	23.56	23.56	23.59	23.64	23.59	23.56	23.59	23.55	23.51	23.44	23.50	23.52	23.38	23.32	23.19
2030	23.50	23.50	23.53	23.56	23.52	23.49	23.53	23.48	23.44	23.37	23.44	23.46	23.33	23.28	23.17
2100	23.45	23.46	23.49	23.54	23.45	23.45	23.49	23.46	23.42	23.36	23.42	23.45	23.34	23.30	23.20
2130	23.19	23.20	23.22	23.29	23.24	23.21	23.25	23.21	23.18	23.13	23.19	23.22	23.11	23.07	22.97
2200	23.02	23.03	23.06	23.11	23.06	23.03	23.06	23.01	22.97	22.90	22.97	23.00	22.88	22.83	22.73
2230	22.76	22.96	23.00	23.05	23.00	22.97	23.01	22.97	22.93	22.87	22.93	22.96	22.83	22.79	22.69
2300	23.01	23.02	23.14	23.0[illegible]	23.03	23.00	23.04	22.99	22.96	22.87	22.95	22.98	22.86	22.82	22.72
2330	[illegible]	22.94	[illegible]	22.94	22.9[illegible]	22.96	22.91	22.88	22.85	22.91	22.89	22.91	22.81	22.77	22.68

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW CLEARING TOWER

JUNE 197?, 6 - LEVELS: 0,5,10,20,50,100, (IN CM)

L.S.T.	16	17	18	19	20	21
0000	25.01	26.30	26.14	26.79	26.63	26.67
0030	25.11	26.30	26.01	26.62	26.61	26.66
0100	24.33	26.12	25.92	26.61	26.62	26.67
0130	24.72	26.04	25.83	26.54	26.63	26.67
0200	24.65	25.96	25.74	26.46	26.63	26.67
0230	24.60	25.88	25.66	26.39	26.63	26.67
0300	24.53	25.80	25.58	26.32	26.63	26.67
0330	24.47	25.74	25.51	26.25	26.62	26.67
0400	24.45	25.68	25.43	26.18	26.62	26.67
0430	24.41	25.63	25.37	26.12	26.61	26.67
0500	24.30	25.57	25.31	26.05	26.61	26.67
0530	24.32	25.52	25.25	25.99	26.60	26.67
0600	24.30	25.48	25.19	25.94	26.59	26.67
0630	24.37	25.45	25.15	25.88	26.58	26.67
0700	24.[illegible]	25.42	25.12	25.83	26.57	26.67
0730	24.[illegible]	25.60	25.12	25.79	26.56	26.67
0800	25.16	25.78	25.18	25.77	26.55	26.67
0830	25.61	26.03	25.31	25.76	26.54	26.67
0900	26.04	26.36	25.51	25.79	26.52	26.67
0930	26.45	26.69	25.75	25.84	26.51	26.67
1000	26.77	26.97	25.98	25.92	26.50	26.67
1030	27.32	27.35	26.23	26.03	26.49	26.67
1100	27.60	27.68	26.50	26.14	26.48	26.67
1130	28.01	28.05	26.78	26.28	26.47	26.67
1200	27.76	27.97	27.02	26.43	26.45	26.67
1230	28.[illegible]	28.33	27.22	26.58	26.44	26.67
1300	28.14	28.64	27.43	26.73	26.43	26.67
1330	28.37	28.92	27.63	26.87	26.43	26.67
1400	28.56	29.18	27.82	27.02	26.42	26.67
1430	28.35	29.21	27.99	27.18	26.42	26.67
1500	28.27	29.02	28.07	27.33	26.42	26.68
1530	27.95	28.90	28.06	27.45	26.42	26.68
1600	27.58	28.80	28.03	27.52	26.42	26.68
1630	27.66	28.63	27.96	27.57	26.43	26.68
1700	27.46	28.44	27.90	27.60	26.44	26.68
1730	27.13	28.22	27.80	27.61	26.44	26.68
1800	26.36	27.99	27.68	27.59	26.45	26.68
1830	26.53	27.76	27.53	27.56	26.47	26.68
1900	26.22	27.52	27.36	27.50	26.48	26.68
1930	25.99	27.31	27.18	27.43	26.49	26.68
2000	25.[illegible]	27.13	27.01	27.35	26.50	26.68
2030	25.6[illegible]	26.97	26.85	27.26	26.52	26.68
2100	25.57	26.85	26.71	27.17	26.53	26.68
2130	25.43	26.72	26.57	27.09	26.54	26.68
2200	25.3[illegible]	26.60	26.44	26.97	26.55	26.68
2230	25.17	26.47	26.32	26.91	26.56	26.68
2300	25.[illegible]	26.37	26.20	26.82	26.57	26.67
2330	24.79	26.27	26.09	26.74	26.58	26.67

AVERAGE WIND SPEED (M/SEC) - CLEARING TOWER

JULY 1,7[illegible] 8 - LEVELS: [illegible],32,24,16,8,4,2,1, (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	[illegible]	6.07	5.17	4.34	3.62	3.22	2.80	2.33
0030	6.[illegible]0	5.93	4.97	4.18	3.45	3.06	2.64	2.20
0100	6.[illegible]	5.89	5.02	4.20	3.63	3.04	2.62	2.17
0130	7.53	5.42	5.51	4.59	3.77	3.36	2.88	2.19
0200	7.37	5.34	5.40	4.62	3.92	3.46	2.98	2.46
0230	7.11	5.16	5.20	4.48	3.76	3.23	2.87	2.18
0300	7.[illegible]	6.07	5.22	4.36	3.65	3.26	2.91	2.33
0330	6.31	5.64	5.31	4.24	3.[illegible]1	3.12	2.69	2.22
0400	7.14	6.17	5.[illegible]	4.67	3.77	3.34	2.89	2.41
0430	7.50	5.50	5.60	4.71	3.94	3.51	3.03	2.51
0500	7.[illegible]	5.51	5.56	4.72	3.74	3.51	3.04	2.54
0530	7.[illegible]7	6.80	5.36	4.96	4.16	3.69	3.16	2.63
0600	7.66	6.55	5.64	4.73	3.97	3.52	3.04	2.52
0630	6.[illegible]	5.87	5.06	4.30	3.60	3.19	2.74	2.28
0700	6.35	5.69	4.76	4.[illegible]8	3.42	3.05	2.62	2.20
0730	5.76	5.20	4.61	4.[illegible]0	3.46	3.06	2.64	2.21
0800	5.[illegible]	5.33	4.73	4.12	3.54	3.14	2.72	2.27
0830	5.[illegible]	5.24	4.66	4.11	3.53	3.19	2.74	2.28
0900	5.75	5.21	4.63	4.28	3.52	3.16	2.71	2.28
0930	5.[illegible]7	5.30	4.74	4.20	3.63	3.26	2.77	2.36
1000	5.74	5.16	4.62	4.04	3.45	3.10	2.62	2.26
1030	5.22	4.72	4.23	3.74	3.17	2.94	2.41	2.07
1100	4.51	4.46	3.95	3.51	3.02	2.72	2.30	1.99
1130	4.07	4.40	3.92	3.49	2.96	2.53	2.21	1.94
1200	4.79	4.53	4.01	3.57	3.07	2.75	2.32	2.04
1230	5.05	4.55	4.06	3.56	3.11	2.80	2.33	2.02
1300	4.73	4.45	3.97	3.51	3.03	2.72	2.32	2.01
1330	5.16	4.62	4.13	3.61	3.12	2.82	2.40	2.04
1400	5.09	5.11	4.59	3.96	3.40	3.04	2.64	2.21
1430	5.06	5.30	4.70	4.07	3.46	3.10	2.69	2.25
1500	6.26	5.89	5.33	4.57	3.46	3.04	2.60	2.14
1530	5.4[illegible]	4.84	4.20	3.62	3.00	2.65	2.30	1.93
1600	5.35	4.79	4.26	3.79	3.20	2.85	2.47	2.04
1630	5.75	5.17	4.60	4.04	3.43	3.06	2.66	2.19
1700	5.[illegible]	5.17	4.53	3.90	3.30	2.95	2.55	2.10
1730	6.[illegible]	5.57	4.52	4.13	3.48	3.08	2.69	2.22
1800	6.60	5.51	5.04	4.33	3.65	3.27	2.92	2.34
1830	6.1[illegible]	5.35	4.67	4.30	3.3[illegible]	2.99	2.58	2.14
1900	6.[illegible]	5.67	4.[illegible]5	4.10	3.40	3.02	2.60	2.14
1930	6.33	5.59	5.08	4.28	3.54	3.18	2.74	2.27
2000	7.11	6.11	5.22	4.43	3.70	3.31	2.95	2.35
2030	7.[illegible]	6.38	5.46	4.55	3.75	3.28	2.93	2.35
2100	7.64	6.57	5.66	4.69	3.92	3.39	2.94	2.45
2130	7.[illegible]7	6.91	5.95	5.00	4.15	3.71	3.16	2.63
2200	7.56	6.51	5.56	4.74	4.01	3.58	3.09	2.57
2230	7.60	6.56	5.69	4.95	4.07	3.65	3.16	2.60
2300	7.[illegible]	6.56	5.76	4.76	4.09	3.44	3.12	2.55
2330	7.[illegible]6	6.36	5.47	4.47	3.98	3.46	3.[illegible]	2.47

AVERAGE TEMPERATURES (C) - CLEARING TOWER

JULY 197?, 15 - LEVELS: 44,40,36,32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	22.71	22.73	22.71	22.90	22.77	22.76	22.81	22.81	22.74	22.77	22.80	22.77	22.76	22.74	22.68
0030	22.55	22.57	22.55	22.44	22.63	22.55	22.65	22.64	22.57	22.61	22.65	22.62	22.61	22.59	22.54
0100	22.59	22.59	22.56	22.65	22.61	22.55	22.64	22.63	22.55	22.58	22.61	22.58	22.56	22.53	22.48
0130	22.49	22.51	22.48	22.57	22.51	22.46	22.57	22.57	22.49	22.53	22.55	22.52	22.50	22.47	22.42
0200	22.42	22.26	22.44	22.34	22.30	22.20	22.35	22.36	22.29	22.34	22.37	22.35	22.35	22.34	22.29
0230	22.15	22.15	22.15	22.25	22.22	22.10	22.27	22.27	22.21	22.26	22.29	22.27	22.27	22.26	22.21
0300	22.17	22.16	22.16	22.30	22.22	22.10	22.26	22.26	22.19	22.24	22.27	22.24	22.24	22.22	22.17
0330	22.14	22.16	22.14	22.24	22.20	22.15	22.25	22.25	22.18	22.23	22.25	22.23	22.22	22.21	22.16
0400	22.01	22.04	22.01	22.11	22.07	22.03	22.12	22.12	22.06	22.11	22.14	22.12	22.12	22.11	22.06
0430	21.96	21.95	21.96	22.05	22.01	21.97	22.06	22.06	20.17	22.03	22.07	22.05	22.04	22.03	21.98
0500	21.98	22.01	21.97	22.06	22.02	21.97	22.04	22.05	20.17	22.02	22.06	22.03	22.02	22.00	21.95
0530	21.95	21.96	21.92	22.01	21.97	21.94	22.00	21.99	21.91	21.95	21.97	21.94	21.93	21.91	21.84
0600	21.76	21.55	21.72	22.01	21.97	21.92	22.00	22.01	21.92	21.95	21.96	21.93	21.92	21.90	21.85
0630	22.10	22.13	22.12	22.22	22.15	22.12	22.21	22.28	22.18	22.28	22.25	22.21	22.23	22.22	22.21
0700	22.43	22.44	22.45	22.56	22.50	22.46	22.57	22.68	22.59	22.70	22.67	22.65	22.75	22.76	22.82
0730	22.97	22.94	22.98	23.10	23.03	23.00	23.14	23.28	23.22	23.36	23.32	23.31	23.53	23.55	23.80
0800	23.35	23.29	23.35	23.47	23.41	23.39	23.55	23.68	23.65	23.80	23.77	23.77	24.04	24.11	24.43
0830	23.69	23.63	23.68	23.79	23.74	23.72	23.89	24.02	24.02	24.19	24.17	24.20	24.51	24.68	25.00
0900	24.08	24.05	24.09	24.21	24.14	24.13	24.31	24.45	24.45	24.65	24.58	24.65	24.97	25.22	25.63
0930	24.44	24.42	24.48	24.40	24.57	24.55	24.75	24.89	24.90	25.14	25.09	25.15	25.53	25.80	26.24
1000	24.74	24.71	24.76	24.96	24.89	24.83	25.07	25.17	25.19	25.43	25.39	25.45	25.85	26.14	26.61
1030	25.26	25.20	25.24	25.36	25.35	25.32	25.52	25.63	25.66	25.88	25.87	25.91	26.33	26.64	27.12
1100	25.74	25.63	25.68	25.79	25.78	25.76	25.96	26.08	26.12	26.35	26.34	26.41	26.84	27.19	27.71
1130	25.99	25.89	25.93	26.05	26.04	26.02	26.21	26.33	26.37	26.59	26.59	26.66	27.07	27.42	27.92
1200	26.28	26.16	26.20	26.36	26.33	26.31	26.51	26.62	26.68	26.90	26.89	26.96	27.39	27.77	28.29
1230	26.41	26.27	26.31	26.45	26.43	26.43	26.63	26.73	26.79	26.99	27.01	27.09	27.50	27.88	28.31
1300	26.35	26.19	26.23	26.40	26.35	26.34	26.53	26.60	26.65	26.82	26.85	26.91	27.30	27.69	28.11
1330	26.41	26.32	26.36	26.52	26.51	26.50	26.69	26.76	26.82	26.99	27.03	27.11	27.50	27.89	28.33
1400	26.52	26.47	26.49	26.68	26.65	26.65	26.86	26.92	26.98	27.17	27.22	27.30	27.71	28.14	28.61
1430	26.47	26.39	26.41	26.59	26.57	26.53	26.68	26.72	26.76	26.94	26.98	27.05	27.41	27.78	28.22
1500	[illegible]	26.95	26.91	27.05	27.10	27.03	27.13	27.23	27.27	27.39	27.30	27.31	27.49	27.76	28.13
1530	26.08	26.75	26.39	26.50	26.50	26.47	26.65	26.71	26.74	26.88	26.92	26.97	27.27	27.57	27.94
1600	26.01	25.97	26.01	26.12	26.12	26.10	26.25	26.32	26.33	26.47	26.51	26.57	26.84	27.12	27.46
1630	25.78	25.76	25.80	25.97	25.97	25.90	26.04	26.09	26.11	26.22	26.27	26.32	26.54	26.79	27.11
1700	25.20	25.32	25.33	25.44	25.44	25.41	25.53	25.57	25.54	25.63	25.67	25.68	25.82	25.96	26.15
1730	24.82	24.85	24.85	24.95	24.93	24.90	25.01	25.03	24.98	25.05	25.08	25.08	25.15	25.22	25.31
1800	24.50	24.53	24.52	24.43	24.60	24.57	24.67	24.69	24.62	24.68	24.71	24.70	24.73	24.76	24.78
1830	24.41	24.47	24.41	24.51	24.50	24.45	24.55	24.56	24.51	24.56	24.59	24.58	24.62	24.64	24.67
1900	24.03	24.05	24.03	24.13	24.02	24.04	24.13	24.13	24.05	24.09	24.11	24.08	24.06	24.04	23.99
1930	23.75	23.77	23.75	23.75	23.80	23.76	23.85	23.85	23.77	23.82	23.84	23.81	23.80	23.78	23.72
2000	23.55	23.56	23.53	23.62	23.59	23.53	23.62	23.61	23.53	23.57	23.60	23.57	23.55	23.53	23.47
2030	23.46	23.48	23.45	23.54	23.50	23.45	23.53	23.52	23.43	23.47	23.49	23.46	23.43	23.41	23.35
2100	23.35	23.37	23.33	23.43	23.35	23.35	23.41	23.41	23.32	23.36	23.33	23.35	23.33	23.30	23.24
2130	23.19	23.21	23.19	23.26	23.24	23.17	23.29	23.29	23.21	23.26	23.28	23.26	23.24	23.23	23.17
2200	23.01	23.03	23.02	23.11	23.08	23.04	23.13	23.14	23.07	23.12	23.15	23.13	23.12	23.11	23.07
2230	22.84	22.87	22.95	22.94	22.91	22.87	22.94	22.97	22.90	22.95	22.98	22.96	22.95	22.94	22.89
2300	22.73	22.75	22.73	22.91	22.80	22.76	22.85	22.86	22.79	22.84	22.87	22.85	22.84	22.83	22.78
2330	22.63	22.66	22.63	22.73	22.65	22.63	22.74	22.75	22.69	22.77	22.76	22.74	22.74	22.74	22.68

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW CLEARING TOWER

JULY 197[illegible], 6 - LEVELS: 0,5,10,20,50,100. (IN CM)

L.S.T.	16	17	18	19	20	21
0000	24.51	25.98	25.59	26.28	26.13	26.38
0030	24.75	25.90	25.51	26.21	26.14	26.38
0100	24.65	25.82	25.44	26.14	26.14	26.38
0130	24.6[illegible]	25.74	25.36	26.07	26.14	26.38
0200	24.56	25.63	25.25	25.98	26.15	26.39
0230	24.46	25.56	25.18	25.91	26.15	26.39
0300	24.40	25.48	25.12	25.85	26.15	26.39
0330	24.30	25.42	25.05	25.79	26.15	26.39
0400	24.3[illegible]	25.35	25.00	25.73	26.14	26.39
0430	24.23	25.28	24.92	25.66	26.14	26.39
0500	24.15	25.22	24.87	25.62	26.13	26.39
0530	24.12	25.15	24.82	25.57	26.13	26.39
0600	24.37	25.09	24.76	25.51	26.12	26.39
0630	24.10	25.06	24.71	25.46	26.11	26.39
0700	24.22	25.11	24.67	25.41	26.10	26.39
0730	24.45	25.26	24.67	25.37	26.10	26.39
0800	24.70	25.47	24.71	25.34	26.09	26.39
0830	25.02	25.76	24.90	25.33	26.08	26.39
0900	25.36	26.14	24.95	25.34	26.07	26.39
0930	25.74	26.53	25.13	25.37	26.06	26.39
1000	26.08	26.92	25.31	25.43	26.04	26.39
1030	26.50	27.35	25.58	25.52	26.03	26.39
1100	26.77	27.77	25.82	25.63	26.02	26.39
1130	27.29	28.15	26.07	25.76	26.01	26.39
1200	27.64	28.58	26.33	25.90	26.00	26.39
1230	27.37	28.94	26.57	26.03	25.99	26.39
1300	27.77	29.30	26.81	26.22	25.99	26.40
1330	27.78	29.44	27.01	26.40	25.98	26.40
1400	28.27	29.93	27.29	26.68	26.00	26.39
1430	28.26	30.03	27.43	26.84	26.00	26.39
1500	28.23	29.90	27.57	26.99	25.99	26.40
1530	28.07	29.71	27.62	27.12	25.99	26.39
1600	27.80	29.37	27.46	27.05	25.97	26.40
1630	27.66	29.13	27.42	27.11	25.97	26.40
1700	27.35	28.79	27.44	27.23	25.98	26.40
1730	27.01	28.47	27.36	27.26	26.01	26.39
1800	26.69	28.15	27.23	27.25	26.02	26.39
1830	26.53	27.97	27.09	27.17	26.03	26.39
1900	26.15	27.56	26.91	27.16	26.05	26.39
1930	25.94	27.33	26.75	27.09	26.06	26.39
2000	25.75	27.12	26.59	27.01	26.07	26.39
2030	25.60	26.95	26.45	26.94	26.08	26.39
2100	25.44	26.76	26.30	26.84	26.10	26.39
2130	25.31	26.61	26.17	26.75	26.11	26.39
2200	25.17	26.48	26.05	26.67	26.13	26.39
2230	25.05	26.35	25.93	26.59	26.14	26.39
2300	24.77	26.22	25.82	26.50	26.15	26.39
2330	[illegible]	26.11	25.72	26.42	26.15	26.39

AVERAGE WIND SPEED (M/SEC) - CLEARING TOWER

SEPTEMBER 1970, 8 - LEVELS: 40,32,24,16,8,4,2,1, (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	7.71	6.62	5.77	4.83	3.88	3.49	3.05	2.65
0030	7.14	6.11	5.24	4.34	3.53	3.19	2.78	2.45
0100	6.73	5.90	5.04	4.07	3.33	2.98	2.56	2.26
0130	[illegible]	5.92	5.05	4.10	3.38	3.03	2.63	2.29
0200	7.42	6.35	5.43	4.50	3.75	3.37	2.93	2.56
0230	7.55	6.45	5.51	4.52	3.76	3.39	2.95	2.49
0300	7.11	5.97	5.10	4.15	3.43	3.11	2.63	2.24
0330	6.32	5.56	4.83	3.99	3.30	2.98	2.58	2.23
0400	6.32	5.36	4.65	3.80	3.16	2.87	2.46	2.12
0430	6.67	5.63	4.95	3.94	3.30	2.98	2.60	2.20
0500	6.42	5.49	4.73	3.86	3.21	2.90	2.49	2.12
0530	6.54	5.55	4.84	3.95	3.32	2.96	2.62	2.12
0600	7.10	5.98	5.18	4.21	3.53	3.17	2.74	2.30
0630	6.11	5.13	4.46	3.63	3.00	2.68	2.32	1.94
0700	5.19	4.43	3.91	3.10	2.54	2.25	1.96	1.69
0730	5.08	4.40	3.83	3.04	2.53	2.24	1.92	1.60
0800	4.64	4.26	3.75	2.97	2.60	2.31	1.97	1.76
0830	4.42	4.06	3.61	2.88	2.56	2.28	1.98	1.78
0900	3.98	3.80	3.42	2.79	2.51	2.25	1.95	1.75
0930	4.19	3.93	3.55	2.89	2.63	2.42	2.08	1.85
1000	4.29	4.08	3.68	3.04	2.71	2.44	2.16	1.88
1030	3.34	3.73	3.39	2.81	2.44	2.25	1.98	1.60
1100	3.20	3.67	3.41	2.81	2.52	2.26	1.98	1.57
1130	3.17	3.73	3.45	2.80	2.46	2.30	2.00	1.58
1200	3.29	3.56	3.28	2.78	2.35	2.25	1.93	1.51
1230	4.24	4.04	3.66	3.10	2.55	2.19	2.02	1.82
1300	3.74	3.67	3.39	2.88	2.25	2.16	1.89	1.71
1330	3.64	3.79	3.46	2.81	2.51	2.20	2.09	1.84
1400	4.41	4.23	3.80	3.29	2.52	2.47	2.19	1.96
1430	4.34	4.33	3.91	3.40	2.21	2.69	2.36	2.11
1500	3.75	4.31	3.65	3.23	2.11	2.48	2.14	1.94
1530	4.42	4.30	3.81	3.24	2.39	2.38	2.02	1.87
1600	4.62	4.55	4.02	3.41	2.73	2.39	2.04	1.88
1630	4.39	4.33	3.79	3.18	2.60	2.35	2.03	1.82
1700	4.12	4.12	3.61	3.02	2.47	2.18	1.92	1.66
1730	4.46	4.48	3.90	3.27	2.63	2.32	2.03	1.75
1800	5.30	4.78	4.16	3.43	2.67	2.35	2.01	1.74
1830	5.23	4.71	4.07	3.34	2.64	2.34	2.01	1.77
1900	4.62	4.39	3.78	3.09	2.49	2.21	1.86	1.67
1930	5.02	4.77	4.11	3.36	2.77	2.53	2.19	1.94
2000	5.11	4.37	4.20	3.44	2.77	2.46	2.18	1.94
2030	4.55	4.56	3.92	3.25	2.64	2.36	2.03	1.86
2100	4.52	4.44	3.88	3.20	2.62	2.33	2.03	1.79
2130	4.27	4.22	3.56	2.99	2.43	2.13	1.82	1.63
2200	4.55	4.57	3.93	3.20	2.50	2.19	1.93	1.66
2230	5.44	5.21	4.50	3.73	3.02	2.70	2.35	2.08
2300	5.45	5.36	4.62	3.77	3.07	2.74	2.33	2.08
2330	5.43	5.34	4.33	3.69	2.90	2.60	2.22	1.99

AVERAGE TEMPERATURES (C) - CLEARING TOWER

SEPTEMBER 1,7,15 - LEVELS: [illegible],40,36,32,28,24,20,16,12,8,6,4,2,0.5. (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	22.17	[illegible]	[illegible]	22.24	22.22	22.14	22.29	22.30	22.17	22.25	22.26	22.22	22.25	22.28	22.27
0030	[illegible]	22.09	21.99	22.14	22.13	22.04	22.19	22.21	22.09	22.22	22.21	22.16	22.24	22.23	22.23
0100	22.09	22.10	21.99	22.15	22.13	22.03	22.18	22.20	22.07	22.20	22.18	[illegible]	22.20	22.18	22.17
0130	22.11	22.13	22.01	22.16	22.14	22.04	22.16	22.20	22.07	22.16	22.18	[illegible]	22.19	22.17	22.16
0200	21.99	22.00	21.88	22.03	22.01	21.91	22.07	22.08	21.95	22.07	22.05	21.95	22.06	22.04	22.03
0230	21.95	21.95	21.82	21.96	21.93	21.93	21.98	22.00	21.86	21.97	21.96	21.84	21.96	21.94	21.92
0300	21.93	21.93	21.90	21.94	21.92	21.82	21.96	21.98	21.84	21.95	21.93	21.82	21.92	21.90	21.88
0330	21.86	21.88	21.75	21.92	21.90	21.80	21.95	21.96	21.82	21.93	21.90	21.80	21.89	21.85	21.84
0400	21.76	21.78	21.66	21.82	21.80	21.70	21.86	21.87	21.73	21.84	21.82	21.72	21.79	21.76	21.74
0430	21.77	21.79	21.65	21.71	21.79	21.68	21.82	21.83	21.68	21.73	21.78	21.67	21.75	21.71	21.68
0500	21.79	21.91	21.68	21.94	21.81	21.71	21.86	21.86	21.72	21.82	21.80	21.67	21.76	21.71	21.57
0530	21.70	21.71	21.58	21.73	21.71	21.61	21.75	21.76	21.62	21.72	21.70	21.56	21.46	21.61	21.48
0600	21.61	21.61	21.69	21.82	21.80	21.66	21.82	21.82	21.67	21.76	21.74	21.61	21.70	21.66	21.63
0630	21.53	21.64	21.72	21.76	21.55	21.75	21.89	21.90	21.76	21.87	21.85	21.71	21.54	21.80	21.69
0700	22.05	22.06	21.97	22.10	21.99	22.02	22.17	22.17	22.06	22.16	22.15	22.05	22.18	22.14	22.18
0730	22.40	22.44	22.35	22.41	22.46	22.38	22.53	22.53	22.46	22.56	22.57	22.55	22.68	22.61	22.77
0800	22.86	22.90	22.83	22.93	22.93	22.86	23.02	23.03	23.01	23.11	23.14	23.20	23.35	23.25	23.53
0830	23.43	23.46	23.40	23.35	23.49	23.42	23.59	23.59	23.61	23.73	23.77	23.96	24.04	23.95	24.29
0900	23.91	23.95	23.90	23.90	23.96	23.91	24.06	24.05	24.11	24.25	24.27	24.58	24.61	24.63	25.02
0930	24.51	24.53	24.49	24.35	24.45	24.50	24.62	24.61	24.70	24.84	24.89	25.31	25.29	25.28	25.73
1000	24.79	24.93	24.80	24.69	24.98	24.81	24.99	24.99	25.09	25.27	25.33	25.75	25.79	25.79	26.30
1030	25.50	25.50	25.47	25.35	25.33	25.43	25.61	25.62	25.71	25.91	25.96	26.38	26.44	26.50	27.02
1100	26.10	26.09	26.06	25.95	26.11	26.02	26.22	26.21	26.34	26.53	26.60	27.04	27.15	27.23	27.78
1130	26.04	26.02	26.00	25.93	26.08	25.99	26.18	26.18	26.28	26.48	26.54	26.98	27.03	27.16	27.64
1200	26.10	26.14	26.11	26.09	26.20	26.11	26.31	26.33	26.39	26.59	26.65	26.90	27.11	27.26	27.74
1230	26.11	26.13	26.10	26.11	26.19	26.08	26.28	26.30	26.36	26.56	26.60	26.88	27.05	27.21	27.71
1300	26.76	26.71	26.67	26.64	26.71	26.61	26.83	26.84	26.93	27.17	27.23	27.27	27.71	27.93	28.45
1330	27.03	26.91	26.90	26.97	26.98	26.91	27.14	27.15	27.24	27.46	27.53	27.77	27.98	28.23	28.70
1400	26.60	26.55	26.53	26.53	26.67	26.66	26.83	26.85	26.92	27.15	27.21	27.52	27.69	27.91	28.37
1430	25.97	25.90	25.98	25.95	26.06	26.02	26.18	26.21	26.25	26.47	26.51	26.51	26.94	27.12	27.55
1500	25.42	25.27	25.21	25.32	25.39	25.37	25.51	25.54	25.52	25.70	25.73	25.69	26.04	26.17	26.51
1530	24.96	24.99	24.91	25.00	25.05	24.97	25.13	25.15	25.09	25.26	25.29	25.24	25.55	25.66	25.98
1600	24.45	24.46	24.39	24.52	24.53	24.40	24.61	24.62	24.54	24.69	24.70	24.64	24.91	24.99	25.14
1630	24.37	24.36	24.26	24.36	24.27	24.31	24.44	24.47	24.37	24.50	24.50	24.50	24.68	24.74	24.95
1700	24.08	24.05	23.98	24.03	24.11	24.02	24.17	24.18	24.08	24.20	24.20	24.20	24.32	24.34	24.52
1730	23.63	23.64	23.73	23.76	23.95	23.75	23.89	23.89	23.76	23.84	23.82	23.74	23.82	23.82	23.93
1800	23.69	23.62	23.54	23.49	23.65	23.54	23.67	23.67	23.50	23.57	23.55	23.46	23.54	23.52	23.56
1830	23.42	23.41	23.23	23.43	23.39	23.28	23.47	23.42	23.26	23.35	23.32	23.25	23.29	23.27	23.26
1900	23.09	23.12	22.99	23.16	23.11	23.01	23.14	23.14	22.99	23.09	23.07	23.05	23.04	23.00	23.00
1930	23.24	[illegible]	23.12	23.26	23.19	23.05	23.15	23.13	22.95	23.03	22.99	22.83	22.91	22.87	22.85
2000	23.13	23.16	23.01	23.13	23.07	22.94	23.04	23.03	22.85	22.91	22.87	22.69	22.77	22.70	22.69
2030	23.13	23.11	22.96	23.10	23.03	22.94	23.06	23.05	22.86	22.91	22.84	22.65	22.68	22.62	22.61
2100	22.99	23.01	22.93	23.03	[illegible]	22.96	23.02	23.01	22.65	22.91	22.85	22.64	22.66	22.57	22.54
2130	22.85	22.95	22.71	22.86	22.70	22.70	22.87	22.84	22.67	22.74	22.70	22.54	22.58	22.50	22.47
2200	22.62	22.80	22.65	22.79	22.74	22.60	22.74	22.73	22.56	22.62	22.59	22.39	22.47	22.43	22.41
2230	22.54	22.61	22.45	22.40	[illegible]	22.42	22.54	22.54	22.38	22.47	22.44	22.32	22.39	22.36	22.34
2300	22.60	22.59	22.43	22.57	22.57	[illegible]	22.52	22.51	22.35	22.44	22.41	22.19	22.33	22.30	22.28
2330	22.72	[illegible]	22.53	[illegible]	22.56	22.51	22.61	22.58	22.41	22.48	22.42	22.24	22.24	22.19	22.19

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW CLEARING TOWER

SEPTEMBER 1977, 6 - LEVELS: (.5,10,20,50,100, (IN CM)

L.S.T.	16	17	18	19	20	21
0000	24.14	24.61	25.51	26.04	26.14	26.05
0030	24.10	24.52	25.41	25.95	26.15	26.05
0100	24.01	24.45	25.31	25.86	26.15	26.05
0130	23.74	24.37	25.23	25.78	26.15	26.05
0200	23.35	24.29	25.14	25.70	26.15	26.05
0230	23.73	24.20	25.06	25.62	26.15	26.05
0300	23.00	24.11	24.99	25.54	26.14	26.05
0330	23.59	24.04	24.91	25.47	26.14	26.05
0400	23.51	23.93	24.83	25.40	26.13	26.05
0430	23.44	23.91	24.76	25.33	26.12	26.05
0500	23.33	23.85	24.70	25.26	26.12	26.05
0530	23.32	23.79	24.63	25.19	26.11	26.05
0600	23.25	23.72	24.57	25.12	26.10	26.05
0630	23.26	23.63	24.50	25.06	26.09	26.05
0700	23.43	23.74	24.45	25.00	26.07	26.05
0730	23.74	23.89	24.44	24.95	26.06	26.05
0800	24.20	24.14	24.48	24.91	26.05	26.05
0830	24.77	24.47	24.58	24.89	26.03	25.19
0900	25.49	24.87	24.74	24.91	26.02	26.05
0930	26.45	25.37	24.96	24.96	26.01	26.05
1000	27.37	26.02	25.25	25.05	25.99	26.05
1030	28.19	26.71	25.58	25.18	25.98	26.05
1100	28.99	27.52	25.93	25.36	25.96	26.05
1130	29.22	28.00	26.30	25.56	25.95	26.05
1200	29.47	28.36	26.61	25.79	25.94	26.05
1230	29.36	28.49	26.85	26.01	25.92	26.05
1300	30.40	28.84	27.09	26.21	25.91	25.19
1330	31.00	29.68	27.39	26.41	25.91	26.05
1400	30.72	29.70	27.68	26.62	25.90	25.19
1430	30.41	29.64	27.86	26.73	25.91	26.06
1500	29.74	29.21	27.98	26.91	25.91	25.20
1530	29.10	28.75	27.98	27.05	25.91	25.20
1600	28.47	28.32	27.91	27.12	25.91	26.06
1630	28.04	27.95	27.83	27.27	25.92	26.05
1700	27.60	27.56	27.66	27.27	25.93	26.05
1730	27.12	27.16	27.52	27.23	25.94	26.05
1800	26.67	26.78	27.34	27.18	25.96	26.05
1830	26.25	26.43	27.14	27.11	25.98	26.05
1900	25.91	26.12	26.94	27.01	25.99	26.05
1930	25.62	25.87	26.74	26.91	26.01	26.05
2000	25.37	25.65	26.54	26.76	26.01	26.05
2030	25.23	25.43	26.37	26.65	26.03	26.05
2100	25.04	25.34	26.22	26.54	26.04	26.05
2130	24.92	25.24	26.09	26.43	26.06	26.05
2200	24.06	25.22	26.05	26.42	26.09	26.05
2230	24.05	25.02	25.86	26.28	26.10	26.05
2300	24.59	24.89	25.75	26.16	26.12	26.05
2330	24.37	24.77	25.65	26.17	26.14	26.05

[illegible] WIND SPEED [illegible] CLEARING TOWER

DECEMBER 197[illegible] [illegible] LEVELS: 4?,32,24,16,8,4,2,1. (IN M)

LST.	1	2	3	4	5	6	7	8
0000	3.56	3.16	0.66	1.59	0.68	1.00	0.85	0.97
0030	3.07	3.09	0.76	1.76	0.75	0.94	0.83	0.79
0100	3.68	3.17	0.77	1.77	0.70	1.09	0.94	0.82
0130	4.09	3.70	0.90	1.87	0.83	1.05	0.92	0.82
0200	4.52	3.53	0.97	1.95	0.84	1.14	0.97	0.85
0230	4.07	3.34	0.76	1.84	0.71	1.01	0.86	0.76
0300	3.93	3.30	0.57	1.76	0.76	1.08	0.93	0.78
0330	4.20	3.59	0.60	1.98	0.81	1.18	1.01	0.87
0400	4.37	3.64	0.91	1.78	0.79	1.21	1.05	0.89
0430	4.76	3.95	1.23	1.04	1.00	1.38	1.23	1.03
0500	4.71	3.84	1.07	1.37	1.11	1.33	1.15	0.98
0530	4.60	3.72	0.85	1.54	1.03	1.24	1.05	0.87
0600	4.32	3.69	0.76	1.70	1.01	1.20	1.35	0.97
0630	4.31	3.55	0.64	1.49	1.03	1.08	0.90	0.76
0700	4.17	3.49	0.81	1.50	1.11	1.23	1.07	0.90
0730	4.11	3.54	0.78	1.65	1.17	1.41	1.24	1.04
0800	4.33	3.94	1.02	2.02	1.24	1.75	1.60	1.34
0830	4.60	4.28	1.73	2.30	1.65	2.05	1.85	1.58
0900	4.90	4.44	1.88	2.36	1.78	2.31	2.09	1.82
0930	5.45	4.85	2.69	3.14	1.89	2.53	2.32	2.01
1000	29.54	4.82	15.12	3.16	1.58	2.34	2.14	1.88
1030	29.45	4.70	15.01	3.19	1.23	2.24	2.04	1.77
1100	5.49	4.99	2.46	3.36	1.61	2.68	2.44	2.11
1130	5.17	4.62	2.14	3.27	1.42	2.60	2.42	2.11
1200	5.15	4.62	1.93	3.42	1.33	2.56	2.37	2.08
1230	5.28	4.65	2.08	3.37	1.30	2.54	2.35	2.05
1300	5.30	4.73	2.22	3.63	1.23	2.61	2.40	2.09
1330	5.16	4.59	2.13	3.52	1.02	2.53	2.32	2.01
1400	5.11	4.56	2.13	3.47	0.79	2.44	2.23	1.94
1430	5.26	4.71	2.34	3.53	1.02	2.51	2.29	1.98
1500	5.12	4.55	2.01	3.35	0.91	2.36	2.14	1.86
1530	5.07	4.46	1.63	3.30	0.95	2.31	2.10	1.83
1600	5.02	4.38	1.59	3.17	0.79	2.10	1.93	1.63
1630	4.95	4.27	1.42	2.91	0.52	1.86	1.67	1.41
1700	4.74	4.01	0.95	2.53	0.33	1.43	1.29	1.05
1730	4.92	4.05	0.78	2.28	0.31	1.25	1.10	0.89
1800	5.07	4.06	0.65	2.24	0.31	1.21	1.13	0.82
1830	5.16	4.10	0.76	2.28	0.32	1.19	1.09	0.77
1900	5.09	4.04	0.65	2.18	0.25	1.07	0.97	0.69
1930	4.09	3.99	0.48	1.95	0.25	0.98	0.86	0.63
2000	4.77	3.77	0.35	1.97	0.25	0.89	0.76	0.54
2030	4.66	3.73	0.38	1.96	0.26	0.85	0.72	0.53
2100	4.63	3.72	0.47	1.97	0.30	0.92	0.76	0.61
2130	4.67	3.76	0.86	2.10	0.54	1.07	0.90	0.77
2200	4.57	3.67	0.78	2.15	0.59	1.14	0.89	0.78
2230	4.52	3.77	0.74	2.16	0.60	1.12	0.99	0.78
2300	4.30	3.54	0.70	2.00	0.58	1.06	0.87	0.76
2330	4.59	[illegible]	0.79	2.21	0.71	1.17	1.00	0.93

AVERAGE TEMPERATURES (C) - CLEARING TOWER

DECEMBER 197[illegible], 15 - LEVELS: 46,40,35,32,28,24,20,16,12,8,6,4,2,0.5. (IN M)

[illegible]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	18.26	18.12	18.07	17.95	17.79	17.64	17.37	16.65	16.25	16.00
0030	[illegible]	18.03	[illegible]	17.79	17.73	17.93	17.87	17.79	17.67	17.51	17.39	17.11	16.38	15.89	15.58
0100	17.77	17.75	17.75	17.54	17.44	17.62	17.50	17.48	17.40	17.24	17.11	16.84	16.07	15.62	15.38
0130	17.52	17.50	17.50	17.35	17.14	17.37	17.26	17.23	17.13	16.95	16.81	16.52	15.81	15.43	15.22
0200	17.22	17.21	17.23	17.32	16.93	17.11	16.99	16.94	16.84	16.69	16.55	16.27	15.57	15.24	15.05
0230	16.91	16.90	16.93	16.73	16.67	16.91	16.71	16.69	16.61	16.44	16.30	16.01	15.41	15.08	14.87
0300	16.69	16.67	16.66	16.41	16.34	16.57	16.41	16.40	16.31	16.15	16.04	15.76	15.07	14.68	14.51
0330	16.46	16.44	16.45	16.21	16.15	16.39	16.25	16.23	16.11	15.97	15.85	15.61	14.96	14.53	14.32
0400	16.22	16.20	16.20	15.96	15.91	16.14	16.02	15.99	15.88	15.74	15.63	15.42	14.84	14.43	14.22
0430	15.96	15.95	15.96	15.81	15.77	15.92	15.84	15.80	15.67	15.52	15.42	15.24	14.72	14.39	14.24
0500	15.72	15.70	15.71	15.56	15.51	15.65	15.57	15.53	15.44	15.32	15.24	15.06	14.63	14.39	14.28
0530	15.55	15.54	15.54	15.44	15.40	15.49	15.40	15.37	15.27	15.11	15.00	14.82	14.35	14.09	13.94
0600	15.39	15.36	15.38	15.29	15.25	15.33	15.24	15.22	15.13	14.99	14.88	14.72	14.26	14.00	13.87
0630	15.27	15.21	15.30	15.21	15.15	15.23	15.13	15.08	14.95	14.82	14.73	14.57	14.13	13.87	13.74
0700	15.64	15.71	15.73	15.84	15.84	15.71	15.78	15.65	15.58	15.40	15.26	14.93	14.34	14.03	13.93
0730	16.03	16.19	16.23	16.54	16.65	16.29	16.51	16.35	16.41	16.31	16.40	16.37	16.24	15.80	15.48
0800	16.24	16.42	16.48	16.79	16.90	16.60	16.87	16.72	16.85	16.79	16.95	17.20	18.06	18.15	17.76
0830	16.43	16.61	16.71	16.96	17.07	16.84	17.13	17.01	17.16	17.14	17.34	17.69	18.69	18.95	18.73
0900	16.70	16.90	17.00	17.25	17.38	17.17	17.48	17.38	17.56	17.58	17.80	18.18	19.16	19.53	19.46
0930	17.19	17.39	17.53	17.71	17.86	17.70	18.05	18.00	18.20	18.26	18.52	18.94	19.90	20.41	20.54
1000	17.78	18.00	18.22	18.45	18.64	18.60	18.88	18.80	19.05	19.44	19.82	17.32	18.09	18.59	18.75
1030	18.07	18.26	18.47	18.69	18.87	18.95	19.14	19.11	19.36	19.75	20.13	17.63	18.35	18.88	19.09
1100	18.38	18.56	18.67	18.91	18.95	18.88	19.15	19.19	19.37	19.49	19.71	20.08	20.80	21.46	21.75
1130	18.70	19.08	19.18	19.36	19.51	19.42	19.75	19.74	19.93	20.06	20.29	20.66	21.35	22.02	22.28
1200	19.36	19.52	19.63	19.81	19.96	19.84	20.11	20.17	20.36	20.50	20.73	21.08	21.70	22.40	22.69
1230	19.77	19.89	20.02	20.24	20.39	20.27	20.48	20.56	20.73	20.87	21.08	21.39	21.95	22.56	22.90
1300	20.14	20.26	20.41	20.60	20.73	20.63	20.85	20.93	21.10	21.24	21.44	21.74	22.25	22.80	23.05
1330	20.50	20.62	20.76	21.00	21.14	21.09	21.21	21.28	21.44	21.57	21.76	22.05	22.53	23.09	23.31
1400	20.78	20.99	21.03	21.25	21.38	21.25	21.48	21.56	21.74	21.88	22.09	22.39	22.92	23.49	23.62
1430	20.99	21.10	21.23	21.43	21.55	21.43	21.64	21.71	21.86	21.98	22.18	22.46	22.95	23.47	23.51
1500	21.11	21.19	21.30	21.48	21.59	21.50	21.66	21.73	21.85	21.95	22.12	22.38	22.84	23.25	23.25
1530	21.18	21.26	21.37	21.52	21.60	21.51	21.66	21.71	21.81	21.90	22.04	22.24	22.63	22.86	22.98
1600	21.14	21.20	21.28	21.41	21.47	21.34	21.50	21.53	21.60	21.64	21.75	21.91	22.25	22.50	22.44
1630	21.07	21.10	21.15	21.25	21.29	21.23	21.28	21.31	21.34	21.35	21.43	21.55	21.84	22.04	21.88
1700	[illegible]	20.93	20.65	20.98	20.99	20.92	20.79	20.77	20.72	20.68	20.69	20.72	20.83	20.88	20.65
1730	20.52	20.46	20.45	20.44	20.39	20.33	20.19	20.12	19.99	19.87	19.80	19.67	19.44	19.25	19.10
1800	20.23	20.21	20.15	20.09	20.02	19.96	19.75	19.67	19.48	19.32	19.20	19.00	18.52	18.23	18.09
1830	20.07	19.98	19.91	19.84	19.74	19.72	19.51	19.43	19.24	19.06	18.93	18.70	18.12	17.86	17.73
1900	19.86	19.77	19.70	19.62	19.53	19.52	19.30	19.22	19.01	18.82	18.68	18.45	17.79	17.45	17.28
1930	19.65	19.57	19.50	19.42	19.33	19.31	19.08	19.00	18.80	18.62	18.48	18.25	17.57	17.15	16.95
2000	19.52	19.44	19.37	19.29	19.20	19.13	18.95	18.86	18.64	18.44	18.29	18.03	17.35	16.98	16.78
2030	19.36	19.29	19.23	19.16	19.04	19.04	18.81	18.72	18.51	18.30	18.15	17.91	17.16	16.71	16.46
2100	[illegible]	19.15	19.10	19.03	18.96	18.94	18.73	18.65	18.46	18.26	18.15	17.92	17.18	16.69	16.46
2130	[illegible]	18.93	[illegible]	18.81	18.74	18.77	18.57	18.55	18.39	18.22	18.11	17.92	17.29	16.80	16.56
2200	[illegible]	18.76	18.72	18.60	18.57	18.60	18.41	18.37	18.23	18.04	17.94	17.73	17.06	16.61	16.40
2230	18.49	18.47	18.46	18.40	18.35	18.30	18.23	18.19	18.05	17.91	17.80	17.61	16.97	16.53	16.28
2300	18.16	18.16	18.15	18.07	[illegible]	[illegible]	17.90	17.94	17.71	17.55	17.44	17.25	16.63	16.28	16.09
2330	[illegible]	17.98	[illegible]	17.74	[illegible]	[illegible]	17.58	17.54	17.42	[illegible]	17.18	16.97	16.43	16.16	16.02

AVERAGE JUNE [illegible] TEMPERATURES (C) - BELOW CLEARING TOWER

DEEP FR 197 [illegible] - LEVELS: 0,5,10,20,50,100, (IN CM)

L.S.T.	16	17	18	19	20	21
0000	18.43	18.57	19.58	20.44	21.45	22.50
0030	18.35	18.47	19.52	20.39	21.47	22.50
0100	18.14	18.35	19.45	20.31	21.47	22.50
0130	18.11	18.25	19.38	20.24	21.47	22.50
0200	18.03	18.16	19.31	20.18	21.46	22.50
0230	17.95	18.09	19.24	20.11	21.48	22.50
0300	17.82	18.01	19.18	20.04	21.46	22.50
0330	17.75	17.92	19.12	19.99	21.48	22.49
0400	17.66	17.84	19.05	19.92	21.44	22.49
0430	17.59	17.77	19.00	19.86	21.47	22.49
0500	17.52	17.70	18.94	19.80	21.47	22.49
0530	17.43	17.63	18.89	19.74	21.47	22.49
0600	17.38	17.56	18.83	19.69	21.46	22.49
0630	17.31	17.50	18.77	19.63	21.46	22.49
0700	17.35	17.48	18.73	19.58	21.46	22.49
0730	17.46	17.52	18.69	19.53	21.45	22.48
0800	17.67	17.69	18.69	19.49	21.44	22.48
0830	17.97	17.93	18.73	19.46	21.44	22.48
0900	18.34	18.24	18.80	19.46	21.43	22.48
0930	18.95	18.73	18.92	19.48	21.42	22.48
1000	17.22	16.97	16.79	17.17	18.73	20.22
1030	17.71	17.37	16.93	17.24	18.73	20.22
1100	20.66	20.14	19.35	19.73	21.39	22.47
1130	21.26	20.55	19.46	19.87	21.39	22.47
1200	21.38	20.91	19.59	20.00	21.38	22.47
1230	21.33	21.16	19.75	20.11	21.37	22.47
1300	21.43	21.12	19.96	20.23	21.36	22.47
1330	21.76	20.97	20.15	20.37	21.35	22.47
1400	22.27	21.01	20.32	20.53	21.35	22.47
1430	22.43	21.11	20.47	20.69	21.35	22.46
1500	22.34	21.16	20.58	20.85	21.34	22.47
1530	22.15	21.10	20.65	20.99	21.34	22.46
1600	21.33	20.96	20.69	21.10	21.34	22.46
1630	21.53	20.79	20.69	21.18	21.34	22.45
1700	21.22	20.59	20.65	21.23	21.34	22.46
1730	20.75	20.34	20.59	21.25	21.35	22.46
1800	20.35	20.03	20.50	21.24	21.35	22.46
1830	20.32	19.84	20.39	21.20	21.36	22.46
1900	19.73	19.62	20.28	21.14	21.36	22.46
1930	19.43	19.41	20.16	21.07	21.37	22.45
2000	19.26	19.23	20.04	20.97	21.38	22.45
2030	19.13	19.03	19.95	20.89	21.39	22.45
2100	18.74	18.95	19.85	20.81	21.40	22.45
2130	18.53	18.84	19.77	20.73	21.40	22.45
2200	18.67	18.74	19.69	20.65	21.41	22.45
2230	18.53	18.64	19.61	20.57	21.42	22.44
2300	18.44	18.53	19.54	20.49	21.43	22.44
2330	18.31	18.41	19.47	20.42	21.43	22.44

AVERAGE WIND SPEED (M/SEC) - FOREST TOWER

JANUARY [illegible], 8 - LEVELS: 46,40,36,32,30,25,16,4. (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	2.26	0.65	1.44	0.51	0.36	0.25	0.25	0.25
0030	2.11	0.66	1.21	0.57	0.31	0.26	0.25	0.25
0100	[illegible]	0.72	1.16	0.61	0.33	0.26	0.25	0.25
0130	[illegible]	0.73	1.25	0.56	0.38	0.26	0.28	0.25
0200	[illegible]	0.76	1.20	0.45	0.34	0.27	0.24	0.26
0230	[illegible]	0.56	1.13	0.48	0.36	0.26	0.26	0.24
0300	2.13	0.92	1.20	0.51	0.39	0.28	0.27	0.24
0330	2.10	1.09	1.23	0.45	0.34	0.27	0.26	0.24
0400	2.03	0.64	1.26	0.45	0.37	0.27	0.27	0.24
0430	2.00	0.62	1.39	0.47	0.37	0.26	0.26	0.24
0500	2.10	0.84	1.43	0.54	0.38	0.27	0.26	0.24
0530	2.16	0.99	1.36	0.62	0.34	0.26	0.26	0.24
0600	2.15	0.98	1.35	0.57	0.40	0.27	0.26	0.24
0630	2.17	0.70	1.32	0.57	0.37	0.29	0.27	0.24
0700	2.13	0.61	1.26	0.55	0.34	0.27	0.27	0.25
0730	2.17	0.85	1.36	0.70	0.38	0.29	0.29	0.28
0800	2.23	0.97	1.54	0.61	0.45	0.32	0.33	0.30
0830	2.40	1.09	1.74	0.69	0.59	0.36	0.38	0.31
0900	2.30	1.38	1.74	0.66	0.60	0.39	0.40	0.32
0930	2.58	1.80	2.01	0.74	0.69	0.40	0.47	0.37
1000	2.51	2.01	1.87	0.66	0.70	0.44	0.52	0.40
1030	2.71	2.36	2.10	0.81	0.79	1.18	0.59	0.45
1100	2.82	2.32	2.20	0.73	0.80	0.54	0.59	0.42
1130	2.85	2.30	2.23	0.79	0.83	0.61	0.62	0.45
1200	2.99	2.21	2.32	0.72	0.89	0.56	0.65	0.47
1230	3.08	2.23	2.43	0.75	0.90	0.57	0.67	0.47
1300	[illegible]	1.97	2.17	0.61	0.81	0.56	0.60	0.45
1330	2.47	1.74	1.79	0.60	0.68	0.49	0.51	0.40
1400	2.56	2.16	1.92	0.59	0.69	0.54	0.49	0.39
1430	2.25	1.61	1.58	0.72	0.61	0.42	0.43	0.37
1500	[illegible]	1.65	1.64	0.64	0.58	0.39	0.36	0.31
1530	[illegible]	1.67	1.52	0.55	0.54	0.34	0.33	0.26
1600	2.41	1.54	1.47	0.55	0.52	0.33	0.29	0.26
1630	2.03	1.19	1.29	0.57	0.43	0.29	0.26	0.24
1700	[illegible]	1.03	1.16	0.52	0.35	0.27	0.25	0.27
1730	[illegible]	0.86	1.08	0.45	0.33	0.26	0.26	0.27
1800	2.13	[illegible]	1.17	0.58	0.41	0.26	0.27	0.26
1830	1.97	0.65	0.98	0.52	0.36	0.27	0.27	0.27
1900	2.12	0.92	0.95	0.53	0.37	0.28	0.27	0.28
1930	2.22	1.95	1.11	0.51	0.38	0.28	0.26	0.27
2000	2.05	0.72	1.16	0.45	0.37	0.27	0.26	0.27
2030	[illegible]	0.69	0.97	0.44	0.34	0.26	0.25	0.27
2100	1.72	0.73	1.05	0.61	0.40	0.27	0.26	0.27
2130	[illegible]	0.93	1.03	0.45	0.38	0.28	0.27	0.27
2200	[illegible]	0.74	1.15	0.47	0.41	0.25	0.25	0.25
2230	[illegible]	0.57	1.26	0.49	0.43	0.25	0.25	0.25
2300	[illegible]	[illegible]	1.24	0.52	0.39	0.26	0.25	0.25
2330	[illegible]	[illegible]	1.24	0.52	[illegible]	0.26	0.25	0.25

AVERAGE TEMPERATURES (C) - FOREST TOWER

JANUARY 1970, 15 - LEVELS: 46,40,36,32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	20.78	20.80	20.90	20.43	20.23	20.33	20.36	20.08	19.71	19.16	18.67	18.46	18.48	18.48	18.54
0030	20.65	20.46	20.75	20.29	20.11	20.21	20.25	19.95	19.62	19.04	18.59	18.33	18.38	18.39	18.44
0100	20.48	20.51	20.59	20.18	19.94	20.07	20.10	19.83	19.52	18.94	18.49	18.24	18.29	18.28	18.34
0130	20.35	20.39	20.48	20.04	19.84	19.94	19.97	19.70	19.40	18.82	18.40	18.16	18.20	18.21	18.50
0200	20.21	20.24	20.31	19.99	19.68	19.82	19.83	19.56	19.23	18.69	18.29	18.07	18.12	18.13	18.19
0230	20.06	20.09	20.14	19.74	19.52	19.62	19.65	19.40	19.08	18.57	18.17	17.96	18.02	18.03	18.09
0300	19.65	19.88	19.94	19.52	19.34	19.42	19.48	19.20	18.92	18.41	18.03	17.83	17.90	17.91	17.97
0330	19.81	19.85	19.92	19.46	19.28	19.38	19.40	19.13	18.84	18.33	17.94	17.76	17.81	17.83	17.89
0400	19.55	19.59	19.66	19.20	19.05	19.15	19.17	18.73	18.66	18.15	17.81	17.68	17.74	17.74	17.81
0430	19.36	19.40	19.50	19.03	18.87	18.94	18.97	18.73	18.40	17.89	17.61	17.51	17.59	17.60	17.66
0500	19.24	19.27	19.35	18.90	18.74	18.82	18.86	18.63	18.30	17.82	17.50	17.39	17.46	17.48	17.55
0530	19.08	19.10	19.12	18.74	18.54	18.66	18.69	18.48	18.20	17.75	17.46	17.36	17.43	17.45	17.51
0600	18.72	18.76	18.80	18.43	18.26	18.38	18.41	18.21	17.98	17.57	17.44	17.28	17.37	17.39	17.46
0630	18.53	18.57	18.58	18.31	18.08	18.19	18.22	18.02	17.81	17.44	17.24	17.17	17.26	17.29	17.35
0700	18.55	18.56	18.36	18.67	18.05	18.09	18.01	17.83	17.63	17.29	17.06	16.99	17.08	17.11	17.18
0730	18.93	18.86	18.52	19.29	19.00	18.36	18.21	18.09	17.95	17.63	17.32	17.18	17.25	17.28	17.34
0800	19.32	19.17	18.75	19.83	19.44	18.59	18.43	18.36	18.28	18.08	17.79	17.51	17.50	17.53	17.58
0830	19.61	19.43	19.08	20.24	20.13	18.98	18.89	18.86	18.77	18.61	18.38	18.08	17.98	17.99	18.02
0900	20.08	19.88	19.53	19.31	20.99	19.55	19.42	19.44	19.34	19.18	18.99	18.70	18.51	18.47	18.47
0930	20.49	20.27	19.98	21.23	21.54	20.16	20.07	20.01	19.98	19.97	19.64	19.40	19.21	19.17	19.13
1000	21.05	20.79	20.54	21.73	22.07	21.51	20.81	20.73	20.78	20.73	20.44	20.09	19.90	19.80	19.74
1030	21.69	21.38	21.16	22.39	22.80	22.74	21.38	21.63	21.36	22.15	21.36	20.92	20.71	20.64	20.53
1100	22.18	21.84	21.65	22.80	23.25	23.19	21.85	22.11	22.22	22.40	21.82	21.56	21.57	21.69	21.59
1130	22.62	22.30	22.15	23.24	23.66	23.63	22.43	22.41	22.79	22.40	22.28	22.10	22.06	22.12	21.92
1200	22.97	22.68	22.59	23.58	23.98	24.09	23.03	22.95	23.31	23.02	22.86	22.65	22.50	22.36	22.23
1230	23.30	23.06	23.01	23.91	24.34	24.54	23.46	23.40	23.50	23.64	23.56	23.19	23.06	22.90	22.76
1300	23.65	23.42	23.30	24.21	24.56	24.63	23.58	23.57	23.73	23.60	23.51	23.31	23.27	23.19	23.06
1330	24.06	23.81	23.67	24.61	24.87	24.77	23.87	23.96	24.18	23.73	23.60	23.39	23.35	23.19	23.11
1400	24.13	23.90	23.78	24.66	24.94	24.62	24.02	24.07	24.24	23.91	23.74	23.51	23.44	23.20	23.10
1430	24.41	24.24	24.09	24.87	25.04	24.63	24.27	24.19	24.25	23.98	23.83	23.54	23.39	23.14	23.04
1500	24.58	24.41	24.29	25.02	25.18	24.70	24.41	24.33	24.29	24.10	23.89	23.48	23.30	23.05	22.97
1530	24.60	24.48	24.35	24.99	25.09	24.65	24.48	24.33	24.26	24.03	23.77	23.25	22.95	22.72	22.65
1600	24.45	24.36	24.26	24.77	24.83	24.40	24.32	24.15	24.06	23.74	23.38	22.70	22.47	22.29	22.26
1630	24.17	24.09	24.02	24.39	24.39	24.02	24.03	23.83	23.71	23.28	22.82	22.11	21.95	21.82	21.80
1700	23.87	23.83	23.78	23.95	23.86	23.64	23.63	23.47	23.28	22.72	22.23	21.59	21.48	21.39	21.38
1730	23.33	23.36	23.37	23.15	22.98	23.02	23.07	22.88	22.62	22.06	21.58	21.03	20.99	20.91	20.91
1800	22.91	22.93	22.98	22.53	22.38	22.46	22.50	22.27	21.95	21.36	20.91	20.46	20.47	20.41	20.43
1830	22.66	22.72	22.84	22.33	22.21	22.32	22.30	22.03	21.68	21.01	20.54	20.18	20.18	20.13	20.07
1900	22.39	22.42	22.49	22.06	21.92	22.04	22.05	21.79	21.45	20.78	20.27	19.96	19.96	19.91	19.95
1930	22.06	22.08	22.17	21.70	21.61	21.75	21.79	21.51	21.19	20.51	19.97	19.67	19.68	19.65	19.68
2000	21.95	21.99	22.10	21.61	21.50	21.62	21.66	21.38	21.04	20.31	19.78	19.51	19.68	19.50	19.54
2030	21.84	21.88	21.99	21.51	21.39	21.51	21.52	21.24	20.88	20.16	19.65	19.37	19.40	19.38	19.42
2100	21.75	21.80	21.89	21.43	21.26	21.33	21.39	21.10	20.77	20.09	19.54	19.41	19.28	19.26	19.31
2130	21.56	21.60	21.66	21.28	21.12	21.21	21.21	20.95	20.64	20.02	19.48	19.18	19.20	19.18	19.23
2200	21.31	21.34	21.42	21.01	20.86	20.96	20.98	20.73	20.42	19.81	19.34	19.09	19.12	19.10	19.15
2230	21.23	21.26	21.35	20.94	20.80	20.89	20.90	20.61	20.27	19.65	19.18	19.02	18.99	18.98	18.88
2300	21.03	21.06	21.14	20.71	20.54	20.62	20.65	20.35	20.00	19.41	18.94	18.70	18.75	18.75	18.80
2330	21.03	21.06	21.14	20.71	20.54	20.62	20.65	20.35	20.00	19.41	18.94	18.70	18.75	18.75	18.80

... SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW FOREST TOWER

JANUARY 1970, 6 - LEVELS: 0,5,10,20,50,100, (IN CM)

L.S.T.	16	17	18	19	20	21
0000	19.23	19.29	19.74	19.84	20.19	20.98
0030	19.17	19.24	19.72	19.98	20.13	20.89
0100	19.11	19.19	19.70	19.81	20.20	20.98
0130	19.05	19.14	19.67	19.80	20.20	20.98
0200	19.00	19.10	19.65	19.79	20.21	20.98
0230	18.95	19.05	19.62	19.78	20.21	20.98
0300	18.90	19.00	19.60	19.76	20.21	20.98
0330	18.83	18.94	19.55	19.71	20.19	20.98
0400	18.75	18.89	19.52	19.70	20.20	20.98
0430	18.71	18.84	19.50	19.69	20.20	20.98
0500	18.65	18.79	19.47	19.67	20.20	20.98
0530	18.61	18.75	19.45	19.65	20.20	20.98
0600	18.57	18.71	19.24	19.64	20.20	20.98
0630	18.52	18.67	19.40	19.62	20.20	20.98
0700	18.45	18.61	19.39	19.63	20.23	20.98
0730	18.47	18.61	19.36	19.61	20.23	20.98
0800	18.46	18.57	19.26	19.53	20.20	20.98
0830	18.61	18.66	19.24	19.51	20.19	20.98
0900	18.73	18.72	19.18	19.45	20.18	20.98
0930	18.95	18.88	19.19	21.58	20.18	20.98
1000	19.17	19.05	19.21	19.41	20.17	20.98
1030	19.47	19.32	19.24	19.43	20.17	20.98
1100	19.63	19.49	19.29	19.44	20.17	20.98
1130	20.52	19.64	19.34	19.45	20.16	20.98
1200	20.04	19.80	19.40	19.47	20.16	20.98
1230	20.21	19.99	19.46	19.49	20.16	20.98
1300	20.35	20.12	19.52	19.52	20.15	20.98
1330	20.43	20.22	19.58	19.55	20.15	20.98
1400	20.61	20.34	19.66	19.60	20.15	20.98
1430	20.84	20.57	19.86	19.75	20.20	20.99
1500	20.95	20.70	19.92	19.79	20.20	20.99
1530	20.93	20.69	19.97	19.82	20.20	20.99
1600	20.86	20.66	20.02	19.86	20.20	20.99
1630	20.77	20.57	20.03	19.88	20.20	20.99
1700	20.66	20.49	20.06	19.91	20.20	20.99
1730	20.51	20.39	20.08	19.94	20.20	20.99
1800	20.36	20.26	20.09	19.96	20.21	20.99
1830	20.22	20.14	20.09	19.98	20.21	20.99
1900	20.10	20.05	20.08	20.00	20.22	20.99
1930	19.92	19.89	20.00	19.95	20.19	20.98
2000	19.83	19.82	19.98	19.95	20.19	19.60
2030	19.76	19.75	19.97	19.95	20.20	20.99
2100	19.70	19.70	19.95	19.95	20.20	20.99
2130	19.64	19.65	19.93	19.95	20.21	20.99
2200	19.59	19.60	19.83	19.94	20.21	20.99
2230	19.53	19.55	19.89	19.93	20.22	20.99
2300	19.43	19.47	19.90	19.92	20.22	20.95
2330	19.43	19.47	19.90	19.92	20.22	20.95

AVERAGE WIND SPEED (M/SEC) - FOREST TOWER

FEBRUARY 1970, 8 - LEVELS: 46,40,36,32,30,25,16,4. (IN M)

E.S.T.	1	2	3	4	5	6	7	8
0000	5.44	4.63	4.00	2.43	1.46	0.65	0.79	0.45
0030	5.34	4.55	3.88	2.34	1.40	0.66	0.76	0.50
0100	[illegible]	4.43	3.80	2.33	1.43	0.62	0.73	0.46
0130	5.32	4.55	3.86	2.32	1.44	0.64	0.76	0.50
0200	5.54	4.55	3.91	2.43	1.49	0.69	0.81	0.54
0230	5.49	4.71	4.04	2.46	1.48	0.68	0.92	0.55
0300	5.86	4.84	4.19	2.49	1.53	0.76	0.89	0.62
0330	5.79	5.01	4.31	2.45	1.62	0.76	0.90	0.63
0400	6.00	5.14	[illegible]	2.71	1.67	0.79	0.92	0.57
0430	6.07	5.19	4.42	2.62	1.61	0.78	0.93	0.55
0500	[illegible]	5.11	4.39	2.58	1.60	0.77	0.95	0.54
0530	5.71	4.88	4.17	2.45	1.50	0.69	0.92	0.57
0600	5.82	4.78	4.12	2.43	1.47	0.62	0.90	0.61
0630	5.55	5.06	4.32	2.56	1.57	0.65	0.93	0.67
0700	6.14	5.26	4.47	2.70	1.66	0.70	0.96	0.67
0730	5.85	5.02	4.31	2.67	1.62	0.68	0.94	0.63
0800	5.72	4.92	4.30	2.64	1.61	0.64	0.94	0.68
0830	5.14	4.49	3.89	2.44	1.51	0.59	0.92	0.61
0900	4.91	4.72	3.80	2.40	1.49	0.55	0.94	0.65
0930	4.99	4.40	3.90	2.51	1.57	0.56	0.99	0.61
1000	4.52	3.94	3.46	2.22	1.39	0.56	0.93	0.60
1030	4.23	3.74	3.32	2.18	1.34	0.52	0.90	0.58
1100	3.80	3.34	2.95	1.98	1.26	0.52	0.84	0.56
1130	3.64	3.22	2.86	1.94	1.23	0.48	0.77	0.56
1200	3.54	3.16	2.82	1.95	1.19	0.46	0.80	0.56
1230	3.61	3.24	2.98	2.01	1.25	0.51	0.82	0.54
1300	3.50	3.14	2.81	1.91	1.15	0.48	0.84	0.55
1330	3.43	3.03	2.70	1.83	1.12	0.44	0.76	0.44
1400	3.61	3.10	2.80	1.92	1.16	0.48	0.78	0.44
1430	3.63	[illegible]	2.84	1.92	1.13	0.46	0.77	0.41
1500	[illegible]	3.08	2.74	1.84	1.05	0.43	0.72	0.40
1530	3.60	3.11	2.72	1.78	1.01	0.43	0.71	0.41
1600	[illegible]	3.29	2.87	1.83	1.03	0.43	0.70	0.38
1630	3.77	3.28	2.85	1.81	1.02	0.41	0.67	0.34
1700	3.71	3.23	2.79	1.72	1.01	0.38	0.64	0.30
1730	4.07	3.51	3.01	1.83	1.08	0.40	0.63	0.29
1800	4.31	3.71	3.17	1.94	1.15	0.38	0.61	0.30
1830	4.32	3.69	3.17	1.90	1.11	0.38	0.58	0.31
1900	4.56	3.90	3.37	2.05	1.23	0.42	0.61	0.34
1930	4.73	4.10	3.51	2.17	1.32	0.44	0.64	0.34
2000	4.99	4.27	3.67	2.31	1.42	0.49	0.69	0.34
2030	[illegible]	4.36	3.76	2.34	1.42	0.52	0.74	0.35
2100	[illegible]	4.53	3.84	2.42	1.43	0.56	0.75	0.35
2130	5.36	[illegible]	3.95	2.41	1.54	0.57	0.78	0.37
2200	5.37	4.61	3.97	2.38	1.49	0.59	0.77	0.37
2230	5.14	4.56	3.92	2.44	1.50	0.56	0.76	0.43
2300	5.45	[illegible]	4.02	2.50	1.54	0.59	0.80	0.42
2330	5.50	[illegible]	4.06	2.55	1.55	0.61	0.83	0.40

AVERAGE TEMPERATURES (C) - FOREST TOWER

FEBRUARY 1970, 15 - LEVELS: 46,40,36,32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

LEVEL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	23.21	23.26	23.17	23.17	23.12	23.15	23.14	23.19	23.12	22.99	22.74	22.65	22.47	22.41	22.38
0030	23.07	23.07	23.01	23.02	23.02	22.99	22.98	23.03	22.98	22.83	22.55	22.45	22.29	22.24	22.21
0100	22.99	22.98	22.93	22.94	22.95	22.91	22.89	22.93	22.86	22.69	22.38	22.26	22.14	22.10	22.07
0130	22.83	22.82	22.76	22.78	22.79	22.75	22.77	22.75	22.68	22.50	22.18	22.07	21.95	21.92	21.90
0200	22.76	22.69	22.64	22.63	22.64	22.61	22.57	22.63	22.56	22.42	22.15	21.97	21.84	21.82	21.80
0230	22.60	22.60	22.54	22.53	22.53	22.50	22.46	22.49	22.43	22.30	22.03	21.86	21.70	21.68	21.66
0300	22.34	22.35	22.30	22.31	22.31	22.29	22.27	22.33	22.28	22.15	21.88	21.74	21.61	21.59	21.57
0330	22.11	22.12	22.07	22.08	22.07	22.05	22.04	22.09	22.05	21.93	21.68	21.60	21.50	21.47	21.45
0400	21.98	21.99	21.94	21.94	21.95	21.94	21.91	21.96	21.91	21.80	21.57	21.46	21.35	21.33	21.31
0430	21.83	21.83	21.78	21.78	21.73	21.75	21.74	21.81	21.79	21.62	21.45	21.33	21.22	21.19	21.17
0500	21.67	21.67	21.63	21.61	21.62	21.59	21.58	21.66	21.66	21.58	21.33	21.24	21.11	21.08	21.06
0530	21.56	21.57	21.52	21.51	21.51	21.48	21.47	21.53	21.52	21.45	21.17	21.06	20.95	20.93	20.92
0600	21.42	21.42	21.37	21.35	21.36	21.34	21.32	21.37	21.35	21.23	20.95	20.85	20.75	20.75	20.75
0630	21.41	21.40	21.35	21.34	21.34	21.30	21.27	21.30	21.27	21.17	20.89	20.79	20.66	20.65	20.64
0700	21.51	21.32	21.79	21.74	21.59	21.51	21.49	21.51	21.45	21.31	21.06	20.94	20.76	20.73	20.71
0730	22.20	22.25	22.29	22.19	22.09	21.63	21.64	21.69	21.64	21.52	21.25	21.14	20.99	20.95	20.92
0800	22.70	22.77	22.37	22.76	22.67	22.10	22.06	22.11	22.16	22.06	21.75	21.60	21.42	21.36	21.33
0830	23.45	23.54	23.05	23.60	23.59	22.93	22.71	22.77	22.84	22.77	22.49	22.33	22.06	21.95	21.91
0900	24.12	24.20	24.35	24.29	24.30	23.62	23.36	23.51	23.52	23.54	23.26	23.16	22.90	22.76	22.72
0930	24.37	24.70	24.44	24.97	24.92	24.17	24.08	24.37	24.30	24.42	24.06	23.97	23.76	23.61	23.51
1000	25.38	25.55	25.70	25.75	25.79	25.39	24.94	25.05	25.08	25.10	24.85	24.78	24.61	24.51	24.40
1030	26.16	26.32	26.47	26.58	26.65	26.91	25.90	25.96	26.03	26.22	25.78	25.74	25.57	25.50	25.42
1100	27.03	27.20	27.33	27.41	27.53	27.69	27.21	26.83	27.02	27.08	27.39	26.95	26.66	26.63	26.54
1130	27.59	27.79	27.92	28.04	28.16	28.25	28.08	27.80	27.99	27.85	28.09	27.81	27.79	27.74	27.68
1200	28.16	28.46	28.50	28.49	28.84	28.93	28.79	28.58	28.68	28.65	28.46	28.37	28.40	28.32	28.25
1230	29.02	29.87	29.96	29.10	29.33	29.46	29.27	29.13	29.18	29.19	28.98	28.92	28.92	28.82	28.80
1300	29.05	29.11	29.20	29.43	29.59	29.72	29.43	29.41	29.51	29.50	29.26	29.28	29.24	29.22	29.20
1330	29.19	29.46	29.56	29.77	29.91	30.05	29.65	29.76	29.87	29.94	29.60	29.60	29.46	29.40	29.31
1400	29.53	29.57	29.70	29.99	30.03	30.30	29.77	30.08	30.01	29.94	29.73	29.65	29.53	29.45	29.35
1430	29.53	29.56	29.67	29.85	30.03	30.14	29.80	29.94	29.92	29.88	29.67	29.61	29.46	29.34	29.23
1500	29.28	29.52	29.66	29.75	29.93	29.92	29.64	29.89	29.80	29.79	29.51	29.45	29.28	29.14	29.02
1530	29.16	29.45	29.47	29.42	29.68	29.60	29.43	29.57	29.58	29.52	29.28	29.17	28.94	28.77	28.65
1600	28.76	28.93	28.79	29.12	29.22	29.15	28.98	29.10	29.12	29.17	28.85	28.72	28.46	28.26	28.10
1630	28.47	28.62	28.56	28.79	28.87	28.30	28.65	28.75	28.77	28.74	28.47	28.29	27.95	27.70	27.54
1700	27.74	28.03	28.35	28.14	28.20	28.13	28.07	28.15	28.18	28.12	27.85	27.58	27.20	26.98	26.85
1730	27.41	27.47	27.46	27.51	27.54	27.43	27.44	27.56	27.57	27.49	27.20	26.86	26.49	26.28	26.18
1800	26.97	26.90	26.87	26.90	26.92	26.80	26.86	26.96	26.95	26.85	26.50	26.13	25.79	25.61	25.52
1830	26.46	26.47	26.42	26.45	26.45	26.42	26.42	26.48	26.44	26.25	25.76	25.31	25.06	24.95	24.88
1900	26.17	26.16	26.13	26.15	26.16	26.12	26.11	26.15	26.08	25.94	25.28	24.75	24.51	24.42	24.37
1930	25.99	25.90	25.95	25.96	25.86	25.83	25.82	25.87	25.80	25.58	25.09	24.56	24.26	24.16	24.11
2000	25.58	25.59	25.35	25.56	25.56	25.53	25.57	25.59	25.54	25.37	24.96	24.47	24.14	24.02	23.96
2030	25.12	25.13	25.19	25.10	25.10	25.03	25.08	25.16	25.12	24.99	24.61	24.24	23.95	23.83	23.77
2100	24.73	24.74	24.72	24.71	24.72	24.56	24.69	24.77	24.73	24.62	24.30	24.04	23.77	23.67	23.61
2130	24.44	24.45	24.40	24.41	24.40	24.36	24.37	24.44	24.42	24.30	24.00	23.78	23.56	23.47	23.42
2200	24.45	24.26	24.20	24.22	24.21	24.17	24.17	24.23	24.19	24.08	23.79	23.55	23.37	23.30	23.25
2230	24.07	24.04	23.79	24.02	24.01	23.93	23.97	24.05	24.02	23.92	23.63	23.40	23.21	23.15	23.10
2300	23.80	23.71	23.74	23.79	23.73	23.75	23.75	23.93	23.82	23.74	23.47	23.26	23.05	22.99	22.95
2330	23.58	23.60	23.55	23.67	23.57	23.54	23.57	23.61	23.61	23.55	23.33	23.19	22.94	22.86	22.82

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW FOREST TOWER

FEBRUARY 1970, 6 - LEVELS: 0,5,10,20,50,100, (IN CM)

L.S.T.	16	17	18	19	20	21
0000	22.46	22.42	22.56	22.54	22.15	22.03
0030	22.39	22.35	22.54	22.52	22.16	22.03
0100	22.36	22.28	22.51	22.50	22.17	22.03
0130	22.23	22.21	22.48	22.48	22.17	22.03
0200	22.15	22.15	22.44	22.46	22.18	22.03
0230	22.[illegible]	22.08	22.41	22.44	22.18	22.04
0300	22.[illegible]	22.02	22.37	22.42	22.19	22.04
0330	21.92	21.95	22.34	22.40	22.19	22.04
0400	21.82	21.87	22.30	22.37	22.20	22.04
0430	21.73	21.79	22.27	22.35	22.20	22.04
0500	21.65	21.72	22.23	22.33	22.20	22.04
0530	21.57	21.65	22.19	22.30	22.20	22.04
0600	21.47	21.58	22.15	22.28	22.21	22.04
0630	21.42	21.51	22.11	22.25	22.21	22.04
0700	21.36	21.47	22.07	22.22	22.21	22.05
0730	21.42	21.47	22.03	22.20	22.21	22.05
0800	21.54	21.53	22.00	22.17	22.21	22.05
0830	21.73	21.65	21.98	22.15	22.21	22.05
0900	21.97	21.81	21.97	22.13	22.21	22.05
0930	22.25	22.00	21.98	22.11	22.21	22.05
1000	22.53	22.25	22.00	22.10	22.20	22.05
1030	23.03	22.56	22.04	22.10	22.20	22.05
1100	23.76	23.60	22.10	22.10	22.20	22.05
1130	24.13	23.67	22.21	22.12	22.19	22.06
1200	24.4[illegible]	23.86	22.33	22.15	22.19	22.06
1230	25.06	24.36	22.44	22.19	22.19	22.06
1300	24.35	24.27	22.54	22.23	22.16	22.06
1330	25.14	24.58	22.69	22.31	22.18	22.06
1400	25.20	24.67	22.78	22.36	22.18	22.06
1430	25.24	24.73	22.87	22.43	22.17	22.06
1500	25.11	24.60	22.95	22.49	22.17	22.06
1530	24.[illegible]	24.52	23.01	22.55	22.17	22.07
1600	24.95	24.43	23.06	22.61	22.17	22.07
1630	24.35	24.31	23.09	22.65	22.17	22.07
1700	24.70	24.20	23.12	22.70	22.18	22.07
1730	24.47	24.04	23.13	22.73	22.18	22.07
1800	24.46	23.88	23.13	22.76	22.19	22.07
1830	[illegible]	23.70	23.12	22.78	22.19	22.07
1900	23.76	23.51	23.10	22.80	22.20	22.07
1930	23.50	23.37	23.07	22.80	22.21	22.07
2000	23.47	23.29	23.03	22.90	22.22	22.08
2030	[illegible]	23.17	22.99	22.90	22.22	22.08
2100	23.25	23.0[illegible]	22.96	22.79	22.23	22.08
2130	23.15	23.00	22.92	22.78	22.24	22.08
2200	23.05	22.92	22.89	22.77	22.25	22.08
2230	[illegible]	22.85	22.86	22.76	22.26	22.08
2300	[illegible]	22.78	22.82	22.74	22.27	22.08
2330	[illegible]	22.71	22.79	22.73	22.27	22.08

AVERAGE WIND SPEED (M/SEC) - FOREST TOWER

APRIL 1970, 8 - LEVELS: 46,40,36,32,30,25,16,4. (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	4.15	3.54	3.03	1.81	1.05	0.42	0.54	0.39
0030	4.20	3.59	3.07	1.87	1.09	0.40	0.56	0.40
0100	4.15	3.52	3.04	1.84	1.06	0.40	0.55	0.37
0130	4.13	3.46	3.05	1.78	1.05	0.44	0.57	0.36
0200	4.22	3.54	3.11	1.85	1.09	0.53	0.64	0.41
0230	4.22	3.60	3.10	1.77	1.05	0.53	0.63	0.43
0300	4.40	3.74	3.25	1.84	1.06	0.53	0.64	0.44
0330	4.63	3.96	3.38	1.90	1.13	0.54	0.58	0.43
0400	4.72	4.02	3.46	2.01	1.15	0.52	0.67	0.48
0430	4.72	4.06	3.56	2.06	1.21	0.53	0.68	0.46
0500	4.66	4.23	3.64	2.09	1.24	0.59	0.69	0.47
0530	4.46	3.83	3.30	1.88	1.13	0.59	0.60	0.41
0600	4.17	3.53	3.06	1.71	1.02	0.60	0.57	0.40
0630	4.10	3.48	2.97	1.66	1.03	0.61	0.57	0.38
0700	3.56	3.06	2.60	1.53	0.92	0.49	0.48	0.35
0730	3.13	2.72	2.35	1.46	0.83	0.50	0.51	0.32
0800	3.23	2.84	2.50	1.59	0.92	0.51	0.54	0.31
0830	3.13	2.78	2.50	1.48	0.91	0.53	0.56	0.32
0900	3.07	2.66	2.35	1.44	0.89	0.45	0.55	0.34
0930	3.14	2.82	2.47	1.45	0.89	0.45	0.62	0.41
1000	3.21	2.89	2.60	1.47	0.95	0.49	0.65	0.42
1030	2.91	2.59	2.27	1.26	0.84	0.47	0.60	0.41
1100	2.94	2.62	2.39	1.30	0.87	0.46	0.64	0.47
1130	2.79	2.47	2.22	1.17	0.81	0.41	0.59	0.44
1200	2.78	2.44	2.26	1.27	0.82	0.44	0.57	0.41
1230	2.56	2.30	2.07	1.11	0.71	0.42	0.60	0.43
1300	2.57	2.30	2.05	1.13	0.73	0.40	0.56	0.37
1330	2.61	2.38	2.14	1.20	0.73	0.38	0.52	0.40
1400	2.76	2.49	2.24	1.30	0.83	0.34	0.54	0.40
1430	2.91	2.56	2.37	1.20	0.80	0.37	0.49	0.38
1500	3.31	2.86	2.63	1.49	0.89	0.42	0.54	0.40
1530	3.27	2.92	2.63	1.52	0.91	0.43	0.53	0.40
1600	2.65	2.54	2.25	1.16	0.74	0.38	0.42	0.31
1630	2.54	2.47	2.13	1.16	0.68	0.36	0.40	0.29
1700	2.83	2.49	2.15	1.12	0.67	0.34	0.36	0.27
1730	2.96	2.55	2.21	1.10	0.67	0.33	0.35	0.27
1800	3.10	2.68	2.33	1.08	0.69	0.34	0.34	0.27
1830	3.35	2.86	2.49	1.18	0.71	0.32	0.38	0.29
1900	3.59	3.03	2.53	1.19	0.76	0.30	0.38	0.29
1930	3.68	3.07	2.64	1.19	0.82	0.31	0.41	0.31
2000	3.97	3.37	2.86	1.31	0.90	0.34	0.47	0.34
2030	4.06	3.47	2.95	1.42	0.95	0.41	0.50	0.35
2100	4.17	3.56	3.04	1.51	0.96	0.45	0.48	0.34
2130	4.24	3.59	3.06	1.54	1.03	0.43	0.47	0.34
2200	4.37	3.74	3.13	1.67	1.10	0.43	0.53	0.34
2230	4.52	3.76	3.23	1.69	1.12	0.43	0.55	0.38
2300	4.46	3.76	3.30	1.81	1.13	0.44	0.59	0.37
2330	4.21	3.57	3.11	1.90	1.09	0.43	0.53	0.37

APRIL 197[illegible], 15 - LEVELS: [illegible],32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

[illegible]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	[illegible]	[illegible]	23.70	23.62	23.46	23.47	23.40	23.33	23.13	22.91	22.48	22.49	22.41	22.37	22.35
0030	[illegible]	[illegible]	23.51	23.30	23.3[illegible]	23.31	23.24	23.17	22.98	22.68	22.34	22.37	22.32	22.29	22.27
0100	[illegible]	[illegible]	23.44	23.23	23.22	23.22	23.15	23.12	22.95	22.61	22.20	22.22	22.19	22.19	22.17
0130	23.19	[illegible]	23.24	23.12	23.03	23.05	22.97	22.97	22.81	22.48	22.13	22.13	22.10	22.09	22.08
0200	[illegible]	23.11	23.06	22.99	22.96	22.87	22.81	22.82	22.68	22.38	22.02	22.04	22.03	22.02	22.01
0230	[illegible]	[illegible]	22.97	[illegible]	22.74	22.77	22.70	22.65	22.52	22.27	21.91	21.95	21.92	21.91	21.90
0300	22.75	22.61	22.77	22.67	22.54	22.57	22.50	22.46	22.34	22.09	21.74	21.76	21.73	21.72	21.72
0330	22.57	22.72	22.69	22.59	22.49	22.55	22.49	22.45	22.26	21.96	21.60	21.64	21.61	21.60	21.59
0400	[illegible]	22.57	22.50	22.36	22.34	22.39	22.34	22.34	22.18	21.89	21.50	21.50	21.47	21.47	21.47
0430	22.40	22.45	22.42	22.30	22.24	22.26	22.27	22.25	22.10	21.80	21.42	21.43	21.36	21.35	21.34
0500	22.36	22.40	22.36	22.21	22.17	22.21	22.16	22.20	22.07	21.82	21.44	21.44	21.36	21.33	21.31
0530	22.16	22.22	22.19	21.95	22.01	22.06	22.00	22.04	21.96	21.73	21.34	21.35	21.29	21.26	21.24
0600	[illegible]	22.15	22.12	22.02	21.92	21.95	21.88	21.90	21.81	21.61	21.24	21.23	21.17	21.15	21.13
0630	22.30	22.30	22.25	22.17	22.16	21.96	21.89	21.97	21.77	21.54	21.21	21.22	21.15	21.13	21.11
0700	22.74	22.62	23.06	22.71	22.97	22.26	22.07	22.07	22.02	21.76	21.38	21.37	21.28	21.27	21.25
0730	23.09	23.11	23.20	23.26	23.78	22.63	22.89	22.57	22.57	22.40	21.95	21.84	21.65	21.60	21.56
0800	23.47	23.56	23.05	23.44	24.27	23.14	23.42	23.06	23.07	23.05	22.60	22.47	22.34	22.35	22.33
0830	24.21	24.15	24.25	24.31	24.90	23.80	23.93	23.73	23.61	23.55	23.24	23.13	22.91	22.82	22.75
0900	25.06	24.77	24.90	23.08	25.32	24.61	24.45	24.44	24.27	24.16	23.90	23.79	23.55	23.40	23.30
0930	25.70	25.36	25.49	24.97	26.26	25.73	25.04	25.13	25.46	24.96	24.74	24.67	24.39	24.23	24.08
1000	26.12	25.77	25.90	25.44	26.33	26.10	25.58	25.69	25.79	25.85	25.37	25.31	25.07	24.91	24.72
1030	[illegible]	26.41	26.52	26.13	27.53	26.76	26.21	26.44	26.38	26.39	26.46	25.95	25.73	25.55	25.36
1100	26.78	26.68	26.32	[illegible]	27.81	27.20	26.86	26.79	26.85	26.79	26.68	26.48	26.29	26.13	25.93
1130	27.41	27.11	27.21	[illegible]	26.17	27.57	27.39	27.21	27.30	27.27	27.14	26.90	26.73	26.55	26.37
1200	27.49	27.31	27.42	27.14	28.18	27.74	27.60	27.58	27.58	27.59	27.34	27.15	26.98	26.78	26.59
1230	28.03	27.76	27.85	27.67	28.50	28.16	28.07	28.03	28.07	28.01	27.78	27.59	27.41	27.21	27.02
1300	[illegible]	27.93	28.02	27.47	28.63	28.35	28.25	28.19	28.23	28.19	27.99	27.78	27.56	27.33	27.13
1330	[illegible]	28.04	28.11	27.76	28.69	28.33	28.29	28.26	28.29	28.21	28.02	27.83	27.60	27.35	27.16
1400	[illegible]	28.17	28.25	27.94	28.76	28.50	28.39	28.39	28.36	28.31	28.13	27.91	27.65	27.37	27.16
1430	[illegible]	27.95	28.04	28.04	28.47	28.23	28.12	28.11	28.11	28.07	27.90	27.65	27.46	27.18	27.00
1500	27.32	27.25	27.32	27.38	27.68	27.46	27.34	27.36	27.38	27.34	27.16	26.93	26.77	26.48	26.33
1530	27.18	27.15	27.21	27.21	27.55	27.37	27.21	27.20	27.20	27.15	26.94	26.76	26.49	26.20	26.04
1600	[illegible]	26.97	27.01	27.08	27.31	27.10	26.91	26.92	26.90	26.81	26.54	26.29	26.01	25.75	25.62
1630	[illegible]	26.87	26.88	26.87	27.13	26.92	26.74	26.75	26.72	26.60	26.34	25.99	25.71	25.48	25.37
1700	[illegible]	26.93	26.93	26.92	27.08	26.87	26.69	26.67	26.59	26.42	26.09	25.66	25.39	25.21	25.13
1730	26.73	26.75	26.76	27.42	26.77	26.63	26.51	26.47	26.33	26.09	25.70	25.23	25.01	24.86	24.80
1800	[illegible]	26.50	26.46	26.40	26.34	26.30	26.23	26.21	26.06	25.70	25.20	24.73	24.57	24.46	24.42
1830	26.30	26.39	26.32	26.72	26.02	26.08	25.98	25.90	25.66	25.20	24.62	24.23	24.13	24.04	24.00
1900	[illegible]	[illegible]	[illegible]	25.90	25.63	25.77	25.67	25.57	25.30	24.83	24.19	23.84	23.74	23.67	23.64
1930	[illegible]	25.93	25.36	25.78	25.54	25.67	25.57	25.47	25.13	24.63	24.00	23.65	23.53	23.48	23.44
2000	[illegible]	25.63	25.53	25.47	25.36	25.44	25.38	25.36	25.09	24.58	23.92	23.56	23.42	23.37	23.34
2030	25.19	25.23	25.19	25.13	25.03	25.05	25.03	25.01	24.83	24.48	23.99	23.69	23.44	23.36	23.32
2100	[illegible]	[illegible]	24.94	24.77	24.66	[illegible]	24.69	24.68	24.51	24.21	23.83	23.62	23.41	23.33	23.28
2130	[illegible]	24.65	24.52	24.54	24.45	24.53	24.49	24.51	24.39	24.12	23.71	23.50	23.32	23.25	23.21
2200	24.44	24.51	24.47	24.44	24.30	24.37	24.33	24.36	24.27	24.00	23.61	23.44	23.25	23.18	23.13
2230	24.35	24.41	24.37	24.35	24.19	24.24	24.20	24.22	24.12	23.86	23.49	23.38	23.19	23.12	23.07
2300	[illegible]	[illegible]	24.27	[illegible]	24.11	24.14	24.09	24.10	23.97	23.73	23.37	23.29	23.14	23.06	23.02
2330	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23.91	23.62	23.34	23.07	23.00	22.89	22.83	22.79

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW FOREST TOWER

APRIL 1972, 6 - LEVELS: 0,5,10,20,50,100. (IN CM)

L.S.T.	16	17	18	19	20	21
0000	22.62	22.97	23.29	23.35	23.36	23.41
0030	22.54	22.93	23.27	23.34	23.35	23.41
0100	22.39	22.89	23.25	23.33	23.35	23.41
0130	22.57	22.85	23.23	23.32	23.35	23.41
0200	22.56	22.82	23.20	23.30	23.33	23.40
0230	22.47	22.73	23.18	23.29	23.34	23.40
0300	22.41	22.60	23.15	23.27	23.34	23.40
0330	22.40	22.57	23.11	23.26	23.34	23.40
0400	22.36	22.55	23.08	23.24	23.34	23.40
0430	22.32	22.50	23.05	23.22	23.34	23.40
0500	22.23	22.39	23.02	23.20	23.34	23.40
0530	22.14	22.29	22.98	23.18	23.34	23.40
0600	22.09	22.24	22.94	23.16	23.34	23.39
0630	22.07	22.24	22.90	23.14	23.34	23.39
0700	22.11	22.26	22.88	23.13	23.35	23.41
0730	22.09	22.31	22.84	23.10	23.35	23.41
0800	22.23	22.45	22.82	23.08	23.35	23.41
0830	22.31	22.56	22.82	23.06	23.35	23.41
0900	22.33	22.68	22.84	23.05	23.35	23.41
0930	22.34	22.84	22.87	23.04	23.34	23.41
1000	22.36	23.02	22.90	23.04	23.34	23.41
1030	22.32	23.23	22.95	23.04	23.33	23.41
1100	22.21	23.36	23.00	23.05	23.33	23.41
1130	22.12	23.51	23.05	23.06	23.32	23.41
1200	21.69	23.65	23.15	23.09	23.32	23.41
1230	21.59	23.80	23.21	23.11	23.32	23.41
1300	21.60	23.94	23.27	23.14	23.31	23.41
1330	21.72	24.09	23.34	23.17	23.31	23.41
1400	21.73	24.12	23.37	23.18	23.29	23.40
1430	21.64	24.19	23.44	23.21	23.29	23.40
1500	21.75	24.12	23.52	23.28	23.30	23.41
1530	21.63	23.85	23.51	23.28	23.28	23.40
1600	21.94	23.64	23.52	23.33	23.30	23.41
1630	22.13	23.35	23.54	23.35	23.30	23.41
1700	22.16	23.64	23.56	23.37	23.30	23.41
1730	22.32	23.60	23.57	23.39	23.31	23.41
1800	22.50	23.75	23.58	23.41	23.31	23.41
1830	22.51	23.66	23.58	23.42	23.31	23.41
1900	22.91	23.57	23.57	23.43	23.32	23.41
1930	22.71	23.49	23.56	23.44	23.32	23.41
2000	22.63	23.43	23.54	23.45	23.33	23.41
2030	22.64	23.38	23.52	23.45	23.33	23.41
2100	22.54	23.35	23.50	23.45	23.34	23.41
2130	22.55	23.31	23.47	23.44	23.34	23.41
2200	22.63	23.26	23.46	23.44	23.34	23.41
2230	22.60	23.25	23.44	23.43	23.35	23.41
2300	22.59	23.27	23.42	23.43	23.35	23.41
2330	[illegible]	23.14	23.38	23.41	23.36	23.41

AVERAGE WIND SPEED [illegible] - FOREST TOWER

June 19[illegible] [illegible] - LEVELS: [illegible] 32, 30, 25, 16, 4. (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	5.20	4.51	3.89	2.37	1.38	0.49	0.83	0.49
0030	[illegible]	4.06	3.50	2.06	1.25	0.38	0.73	0.47
0100	5.12	4.42	3.81	2.27	1.37	0.50	0.85	0.56
0130	4.92	4.13	3.61	2.11	1.24	0.43	0.81	0.54
0200	4.84	4.19	3.61	2.10	1.24	0.44	0.79	0.55
0230	4.67	4.21	3.59	2.12	1.29	0.44	0.90	0.52
0300	4.63	4.05	3.47	2.06	1.22	0.40	0.74	0.50
0330	4.57	3.73	3.37	2.01	1.19	0.37	0.67	0.45
0400	4.16	3.56	3.06	1.78	1.04	0.34	0.60	0.36
0430	[illegible]	3.47	3.00	1.75	1.02	0.35	0.63	0.37
0500	[illegible]	3.57	3.07	1.77	1.04	0.37	0.60	0.33
0530	4.42	3.44	2.96	1.76	1.02	0.35	0.56	0.35
0600	4.22	3.46	2.95	1.68	0.96	0.36	0.56	0.31
0630	4.15	3.53	3.03	1.72	0.99	0.39	0.60	0.35
0700	3.63	3.27	2.82	1.64	0.96	0.34	0.57	0.37
0730	3.78	3.28	2.83	1.65	0.94	0.34	0.60	0.35
0800	3.56	3.10	2.72	1.60	0.91	0.34	0.63	0.38
0830	3.85	3.38	2.99	1.86	1.10	0.40	0.69	0.39
0900	4.00	3.49	3.11	1.89	1.11	0.41	0.75	0.41
0930	3.94	3.37	2.97	1.83	1.08	0.40	0.69	0.40
1000	3.67	3.24	2.86	1.76	1.08	0.38	0.64	0.38
1030	3.37	3.00	2.69	1.69	1.04	0.37	0.61	0.40
1100	3.52	3.09	2.76	1.69	1.03	0.38	0.65	0.40
1130	3.46	3.08	2.76	1.79	1.17	0.34	0.61	0.43
1200	3.47	3.09	2.75	1.82	1.20	0.42	0.56	0.43
1230	3.69	3.31	2.96	1.90	1.19	0.42	0.66	0.44
1300	3.20	2.86	2.54	1.63	1.06	0.38	0.57	0.39
1330	3.39	2.98	2.65	1.66	1.03	0.38	0.59	0.39
1400	3.40	3.02	2.69	1.69	1.07	0.41	0.58	0.40
1430	3.24	2.92	2.60	1.60	0.99	0.43	0.54	0.40
1500	3.29	2.89	2.56	1.52	0.89	0.44	0.58	0.42
1530	3.56	3.10	2.72	1.58	0.93	0.42	0.57	0.36
1600	3.77	3.37	2.97	1.78	1.04	0.47	0.59	0.37
1630	3.45	3.04	2.64	1.60	0.91	0.43	0.51	0.28
1700	3.99	3.45	3.01	1.78	1.02	0.50	0.61	0.36
1730	4.02	3.54	3.08	1.85	1.08	0.51	0.62	0.41
1800	4.36	3.80	3.29	1.97	1.16	0.54	0.65	0.42
1830	4.48	3.91	3.40	1.99	1.20	0.54	0.67	0.39
1900	4.52	3.96	3.41	1.96	1.15	0.58	0.67	0.43
1930	4.69	3.97	3.43	1.97	1.11	0.54	0.71	0.42
2000	4.66	3.99	3.45	1.99	1.15	0.42	0.68	0.39
2030	4.69	4.03	3.47	2.00	1.16	0.43	0.63	0.40
2100	4.56	4.33	3.73	2.28	1.38	0.49	0.69	0.44
2130	[illegible]	4.26	3.73	2.36	1.53	0.56	0.74	0.50
2200	4.56	3.97	3.43	2.11	1.33	0.49	0.69	0.45
2230	[illegible]	4.17	3.55	2.09	1.28	0.45	0.74	0.47
2300	5.25	4.45	[illegible]	2.40	1.46	0.48	0.76	0.45
2330	5.07	4.74	3.74	2.23	1.35	0.43	0.60	0.50

AVERAGE TEMPERATURES (C) - FOREST TOWER

June 197[illegible], 15 - LEVELS: 46,40,36,32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

[illegible]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000 0030	[illegible]	22.74 23.03	22.74 23.02	22.71 23.00	22.79 23.04	22.74 22.99	22.78 22.93	22.83 23.02	22.85 23.00	22.84 22.97	22.70 22.83	22.80 22.93	22.76 22.91	22.79 22.92	22.79 22.92
0100 0130	22.52 22.47	22.50 22.50	22.56 22.43	22.53 22.43	22.57 22.45	22.54 22.41	22.51 22.37	22.63 22.46	22.65 22.44	22.63 22.40	22.50 22.27	22.62 22.39	22.60 22.39	22.63 22.43	22.64 22.44
0200 0230	22.42 22.33	22.45 22.36	22.46 22.35	22.30 22.29	22.43 22.34	22.37 22.26	22.32 22.22	22.40 22.29	22.35 22.26	22.29 22.19	22.16 22.06	22.30 22.19	22.30 22.19	22.34 22.24	22.36 22.26
0300 0330	22.23 22.20	22.20 22.24	22.25 22.23	22.21 22.19	22.26 22.25	22.19 22.19	22.14 22.13	22.21 22.17	22.19 22.12	22.14 22.07	22.01 21.93	22.12 22.06	22.12 22.06	22.16 22.11	22.18 22.13
0400 0430	22.16 22.15	22.19 22.19	22.18 22.17	22.14 22.14	22.20 22.19	22.14 22.13	22.09 22.09	22.17 22.18	22.14 22.17	22.10 22.12	21.95 21.97	22.05 22.07	22.05 22.07	22.10 22.11	22.12 22.13
0500 0530	22.12 22.15	22.15 22.19	22.14 22.18	22.09 22.13	22.15 22.18	22.10 22.11	22.05 22.05	22.16 22.15	22.17 22.17	22.15 22.15	22.00 22.01	22.07 22.09	22.05 22.07	22.10 22.11	22.12 22.12
0600 0630	22.21 22.33	22.26 22.41	22.24 22.41	22.18 22.40	22.22 22.41	22.15 22.33	22.09 22.29	22.17 22.33	22.17 22.30	22.15 22.27	22.00 22.13	22.09 22.21	22.08 22.20	22.13 22.24	22.14 22.25
0700 0730	22.71 23.10	22.84 23.22	22.87 23.34	22.78 23.39	22.85 23.40	22.72 23.14	22.72 23.18	22.70 23.11	22.67 23.06	22.60 22.98	22.41 22.77	22.48 22.80	22.45 22.75	22.48 22.76	22.48 22.75
0800 0830	23.70 24.31	23.92 24.55	24.02 24.67	24.11 24.76	24.12 24.79	23.76 24.52	23.70 24.25	23.82 24.49	23.62 24.23	23.52 24.10	23.25 23.85	23.23 23.77	23.16 23.64	23.16 23.61	23.15 23.59
0900 0930	24.32 24.60	24.77 25.06	24.90 25.20	25.04 25.35	25.05 25.38	24.92 25.22	24.55 24.82	24.67 24.93	24.54 24.87	24.46 24.81	24.22 24.57	24.18 24.51	24.04 24.37	23.98 24.32	23.94 24.29
1000 1030	25.16 25.69	25.37 25.92	25.49 26.06	25.62 26.22	25.64 26.24	25.50 26.14	25.19 25.74	25.26 25.76	25.22 25.77	25.20 25.68	24.94 25.43	24.90 25.37	24.76 25.22	24.67 25.12	24.62 25.08
1100 1130	25.95 [illegible]	26.17 26.26	26.31 26.42	26.45 26.56	26.48 26.59	26.36 26.53	26.06 26.37	26.02 26.22	26.00 26.21	25.93 26.15	25.68 25.90	25.61 25.83	25.44 25.67	25.35 25.58	25.31 25.51
1200 1230	26.15 26.43	26.22 26.49	26.38 26.58	26.54 26.72	26.56 26.76	26.49 26.68	26.34 26.52	26.28 26.50	26.21 26.48	26.13 26.42	25.87 26.16	25.81 26.08	25.62 25.88	25.52 25.77	25.46 25.69
1300 1330	26.64 26.73	26.69 26.97	26.80 27.09	26.90 27.24	26.95 27.31	26.86 27.25	26.73 27.07	26.70 27.02	26.66 26.97	26.56 26.86	26.28 26.59	26.20 26.47	25.99 26.25	25.88 26.13	25.80 26.05
1400 1430	27.09 26.62	27.15 26.68	27.23 26.79	27.43 26.89	27.51 26.94	27.46 26.90	27.33 26.77	27.25 26.72	27.19 26.69	27.08 26.59	26.84 26.36	26.71 26.30	26.47 26.10	26.32 25.96	26.21 25.88
1500 1530	26.08 25.93	26.16 26.00	26.24 26.08	26.32 26.15	26.37 26.12	26.33 26.10	26.17 25.94	26.13 25.94	26.11 25.89	26.02 25.78	25.78 25.52	25.74 25.46	25.59 25.30	25.48 25.23	25.43 25.19
1600 1630	[illegible]	25.91 26.03	25.96 26.12	26.04 26.21	26.10 26.22	26.03 26.23	25.85 26.01	25.87 26.01	25.81 25.93	25.67 25.77	25.41 25.47	25.34 25.37	25.16 25.18	25.07 25.12	25.03 25.08
1700 1730	[illegible] 25.12	25.54 25.21	25.59 25.26	25.66 25.32	25.77 25.38	25.67 25.31	25.48 25.18	25.50 25.22	25.43 25.15	25.25 24.97	24.94 24.64	24.84 24.56	24.66 24.42	24.61 24.40	24.58 24.40
1800 1830	24.72 24.35	24.79 24.39	24.81 24.39	24.92 24.36	24.67 24.41	24.78 24.30	24.71 24.32	24.78 24.42	24.72 24.36	24.59 24.24	24.29 23.95	24.19 23.85	24.08 23.77	24.08 23.78	24.08 23.79
1900 1930	24.00 23.79	24.03 23.92	24.01 23.77	23.95 23.72	24.01 23.77	23.90 23.73	23.93 23.69	24.01 23.76	23.96 23.72	23.85 23.61	23.61 23.39	23.58 23.37	23.50 23.30	23.51 23.32	23.52 23.33
2000 2030	23.62 23.55	23.65 23.58	23.64 23.57	23.59 23.52	23.65 23.59	23.61 23.54	23.57 23.50	23.65 23.60	23.60 23.56	23.48 23.44	23.26 23.21	23.27 23.21	23.20 23.17	23.22 23.19	23.22 23.20
2100 2130	23.31 23.24	23.55 23.28	23.54 23.27	23.50 23.23	23.56 23.29	23.51 23.23	23.47 23.20	23.59 23.31	23.57 23.30	23.48 23.26	23.25 23.08	23.23 23.11	23.17 23.06	23.19 23.07	23.19 23.08
2200 2230	[illegible]	23.06 23.02	23.07 23.01	23.03 22.96	23.05 23.02	23.02 22.97	22.98 22.93	23.07 23.03	23.03 23.01	22.97 22.97	22.79 22.73	22.86 22.78	22.81 22.74	22.83 22.76	22.84 22.77
2300 2330	[illegible]	23.06 22.91	23.05 22.95	23.02 22.97	23.10 22.93	23.02 [illegible]	22.97 22.84	23.07 22.95	23.04 22.94	22.96 22.85	22.77 22.69	22.80 22.75	22.74 22.71	22.75 22.73	22.75 22.72

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW FOREST TOWER

June 1970, 6 - LEVELS: 0,5,10,20,50,100, (IN CM)

L.S.T.	16	17	18	19	20	21
0000	23.89	23.85	24.18	24.27	24.24	24.20
0030	23.91	23.87	24.16	24.24	24.24	24.21
0100	23.86	23.82	24.17	24.26	24.25	24.20
0130	23.79	23.75	24.13	24.24	24.24	24.20
0200	23.76	23.71	24.11	24.22	24.25	24.20
0230	23.72	23.67	24.08	24.21	24.24	24.20
0300	23.68	23.63	24.05	24.19	24.24	24.20
0330	23.65	23.60	24.03	24.18	24.24	24.20
0400	23.62	23.56	24.01	24.16	24.24	24.19
0430	23.59	23.54	23.98	24.15	24.24	24.19
0500	23.57	23.52	23.96	24.13	24.24	24.19
0530	23.55	23.50	23.93	24.11	24.24	24.19
0600	23.53	23.48	23.92	24.10	24.24	24.19
0630	23.53	23.48	23.90	24.08	24.24	24.20
0700	23.53	23.50	23.86	24.07	24.23	24.19
0730	23.57	23.53	23.87	24.05	24.23	24.19
0800	23.62	23.60	23.86	24.04	24.23	24.19
0830	23.70	23.68	23.87	24.03	24.22	24.19
0900	23.78	23.78	23.88	24.02	24.22	24.20
0930	23.86	23.87	23.90	24.01	24.22	24.20
1000	23.95	24.01	23.96	24.05	24.25	24.23
1030	24.05	24.12	23.97	24.03	24.22	24.20
1100	24.19	24.23	24.01	24.04	24.23	24.22
1130	24.25	24.25	24.01	24.01	24.19	24.19
1200	24.21	24.26	24.07	24.03	24.19	24.18
1230	24.32	24.43	24.08	24.05	24.19	24.19
1300	24.35	24.48	24.13	24.07	24.19	24.19
1330	24.44	24.52	24.18	24.08	24.19	24.19
1400	24.50	24.58	24.22	24.11	24.18	24.19
1430	24.53	24.61	24.27	24.13	24.18	24.19
1500	24.51	24.58	24.31	24.15	24.18	24.20
1530	24.51	24.57	24.33	24.18	24.18	24.20
1600	24.54	24.58	24.35	24.20	24.18	24.20
1630	24.57	24.62	24.40	24.23	24.19	24.20
1700	24.45	24.50	24.38	24.24	24.18	24.20
1730	24.44	24.44	24.38	24.25	24.18	24.20
1800	24.39	24.39	24.38	24.26	24.18	24.19
1830	24.33	24.33	24.38	24.27	24.19	24.20
1900	24.27	24.25	24.36	24.29	24.19	24.20
1930	24.20	24.18	24.34	24.28	24.19	24.20
2000	24.14	24.12	24.32	24.29	24.19	24.19
2030	24.10	24.07	24.30	24.28	24.20	24.20
2100	24.06	24.04	24.27	24.27	24.20	24.19
2130	24.03	24.00	24.25	24.27	24.20	24.19
2200	23.99	23.95	24.23	24.26	24.21	24.20
2230	23.94	23.91	24.21	24.25	24.21	24.20
2300	23.91	23.85	24.20	24.26	24.23	24.21
2330	23.86	23.83	24.16	24.23	24.21	24.19

AVERAGE WIND SPEED (M/SEC) - FOREST TOWER

JULY 19[illegible], [illegible] - LEVELS: 46,40,36,32,30,25,16,4. (IN M)

E.S.T.	1	2	3	4	5	6	7	8
0000	4.71	4.09	3.55	2.10	1.21	0.73	0.65	0.47
0030	[illegible]	4.14	3.57	2.16	1.28	0.75	0.66	0.45
0100	4.96	4.26	3.70	2.19	1.30	0.77	0.68	0.47
0130	5.32	4.57	3.96	2.33	1.37	0.85	0.76	0.54
0200	[illegible]	4.59	3.95	2.38	1.38	0.85	0.76	0.51
0230	5.21	4.47	3.87	2.33	1.37	0.84	0.79	0.51
0300	5.09	4.36	3.77	2.24	1.33	0.81	0.74	0.47
0330	4.97	4.26	3.66	2.22	1.30	0.77	0.71	0.43
0400	5.16	4.49	3.89	2.34	1.34	0.77	0.78	0.46
0430	5.41	4.66	4.02	2.44	1.43	0.85	0.78	0.47
0500	[illegible]	4.70	4.07	2.50	1.49	0.88	0.78	0.53
0530	5.65	4.87	4.21	2.55	1.48	0.93	0.86	0.56
0600	5.01	4.78	4.14	2.50	1.48	0.93	0.81	0.54
0630	5.06	4.37	3.77	2.24	1.32	0.81	0.71	0.46
0700	4.73	4.06	3.51	2.10	1.22	0.76	0.69	0.42
0730	4.65	4.02	3.49	2.12	1.24	0.76	0.69	0.41
0800	4.51	3.92	3.41	2.05	1.19	0.75	0.69	0.41
0830	4.24	3.71	3.23	1.99	1.17	0.70	0.71	0.44
0900	4.46	3.90	3.42	2.08	1.22	0.74	0.71	0.43
0930	4.56	4.00	3.46	2.09	1.25	0.77	0.72	0.45
1000	4.44	3.85	3.35	2.07	1.25	0.71	0.71	0.44
1030	3.95	3.49	3.03	1.92	1.16	0.60	0.59	0.41
1100	3.74	3.25	2.84	1.79	1.10	0.63	0.59	0.42
1130	3.66	3.22	2.81	1.81	1.10	0.76	0.58	0.41
1200	3.85	3.38	2.97	1.87	1.14	0.89	0.63	0.44
1230	3.96	3.47	3.02	1.94	1.18	0.91	0.63	0.43
1300	3.80	3.30	2.88	1.79	1.06	0.89	0.61	0.39
1330	3.96	3.43	2.99	1.87	1.13	0.86	0.61	0.39
1400	4.14	3.60	3.15	1.98	1.21	0.74	0.61	0.36
1430	4.35	3.82	3.35	2.13	1.28	0.80	0.73	0.40
1500	[illegible]	3.75	3.29	2.04	1.25	0.77	0.62	0.37
1530	3.68	3.19	2.75	1.75	1.09	0.65	0.53	0.35
1600	3.91	3.40	2.96	1.80	1.09	0.73	0.57	0.34
1630	4.07	3.49	3.01	1.78	1.05	0.71	0.55	0.35
1700	4.11	3.59	3.09	1.81	1.05	0.71	0.59	0.34
1730	4.39	3.76	3.24	1.90	1.13	0.72	0.59	0.34
1800	4.42	3.84	3.29	1.94	1.13	0.74	0.60	0.34
1830	4.43	3.62	3.26	1.86	1.10	0.73	0.60	0.32
1900	4.62	3.95	3.36	1.95	1.11	0.77	0.64	0.35
1930	4.76	4.13	3.56	2.06	1.20	0.81	0.68	0.34
2000	[illegible]	4.29	3.73	2.17	1.27	0.85	0.69	0.34
2030	5.27	4.55	3.86	2.27	1.34	0.88	0.77	0.40
2100	5.32	4.59	3.95	2.36	1.41	0.92	0.80	0.46
2130	5.71	4.91	4.20	2.49	1.47	0.99	0.84	0.49
2200	5.56	4.76	4.11	2.46	1.47	0.93	0.95	0.45
2230	5.41	4.72	4.39	2.43	1.41	0.94	0.90	0.55
2300	[illegible]	4.92	4.14	2.50	1.47	0.93	0.88	0.56
2330	5.31	4.61	3.56	2.41	1.41	0.88	0.80	0.51

AVERAGE TEMPERATURES (C) - FOREST TOWER

JULY 1970, 15 - LEVELS: 45,40,36,32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	22.67	22.71	22.70	22.69	22.69	22.71	22.71	22.78	22.81	22.78	22.66	22.68	22.66	22.68	22.69
0030	22.51	22.55	22.54	22.53	22.53	22.56	22.54	22.63	22.66	22.67	22.52	22.55	22.55	22.58	22.60
0100	22.51	22.54	22.53	22.52	22.52	22.53	22.53	22.59	22.62	22.57	22.46	22.48	22.47	22.50	22.52
0130	22.43	22.46	22.46	22.45	22.45	22.40	22.46	22.53	22.57	22.55	22.43	22.39	22.37	22.40	22.42
0200	22.21	22.25	22.25	22.25	22.25	22.23	22.28	22.36	22.42	22.42	22.34	22.35	22.31	22.34	22.36
0230	22.17	22.17	22.18	22.17	22.18	22.20	22.20	22.28	22.33	22.34	22.28	22.32	22.29	22.31	22.32
0300	22.10	22.14	22.14	22.13	22.14	22.15	22.15	22.22	22.27	22.27	22.20	22.25	22.23	22.25	22.26
0330	22.10	22.14	22.14	22.13	22.13	22.13	22.14	22.21	22.26	22.26	22.18	22.23	22.20	22.22	22.23
0400	21.96	22.00	22.00	21.97	22.00	22.02	22.02	22.09	22.15	22.15	22.09	22.15	22.14	22.16	22.17
0430	21.91	21.95	21.95	21.93	21.94	21.96	21.96	22.04	22.09	22.10	22.04	22.10	22.09	22.11	22.13
0500	21.90	21.93	21.92	21.91	21.90	21.92	21.92	21.99	22.04	22.04	21.97	22.03	22.02	22.05	22.07
0530	21.83	21.85	21.84	21.81	21.81	21.83	21.83	21.91	21.95	21.94	21.87	21.92	21.90	21.92	21.94
0600	21.82	21.86	21.86	21.84	21.81	21.82	21.83	21.89	21.93	21.90	21.82	21.88	21.86	21.89	21.90
0630	21.99	22.06	22.10	22.10	22.00	21.99	22.01	22.03	22.06	22.03	21.93	21.96	21.95	21.97	21.99
0700	22.29	22.44	22.47	22.49	22.35	22.26	22.35	22.27	22.30	22.27	22.16	22.17	22.14	22.16	22.17
0730	22.77	23.00	23.05	23.12	23.03	22.74	22.96	22.73	22.75	22.73	22.59	22.56	22.50	22.51	22.51
0800	23.15	23.41	23.48	23.56	23.50	23.16	23.26	23.23	23.11	23.10	22.94	22.91	22.82	22.81	22.81
0830	23.65	23.86	23.95	24.06	24.03	23.85	23.62	23.79	23.61	23.55	23.42	23.39	23.29	23.25	23.24
0900	23.94	24.17	24.26	24.38	24.36	24.30	23.94	24.04	23.94	23.90	23.76	23.72	23.58	23.50	23.46
0930	24.31	24.62	24.74	24.89	24.39	24.82	24.42	24.46	24.41	24.36	24.21	24.12	23.97	23.89	23.84
1000	24.37	24.61	24.70	24.84	24.83	24.76	24.46	24.49	24.49	24.46	24.30	24.25	24.12	24.05	24.01
1030	25.14	25.40	25.49	25.62	25.60	25.57	25.23	25.18	25.26	25.16	24.96	24.85	24.71	24.61	24.56
1100	25.37	25.84	25.96	26.07	26.03	26.00	25.76	25.61	25.63	25.58	25.39	25.27	25.10	25.00	24.94
1130	25.58	26.11	26.24	26.77	26.32	26.30	26.14	25.93	25.93	25.85	25.65	25.52	25.35	25.23	25.16
1200	26.13	26.26	26.41	26.56	26.55	26.53	26.39	26.24	26.21	26.11	25.90	25.73	25.55	25.43	25.36
1230	26.31	26.45	26.54	26.70	26.67	26.64	26.48	26.39	26.39	26.31	26.08	25.87	25.66	25.53	25.47
1300	26.29	26.42	26.51	26.45	26.62	26.59	26.45	26.37	26.36	26.26	26.07	25.95	25.74	25.60	25.53
1330	26.48	26.59	26.69	26.96	26.95	26.82	26.66	26.56	26.54	26.43	26.21	26.00	25.78	25.65	25.59
1400	26.97	26.79	26.98	27.06	27.03	27.12	27.00	26.87	26.86	26.78	26.60	26.42	26.18	26.01	25.90
1430	26.71	26.77	26.97	27.06	27.19	27.12	26.98	26.84	26.83	26.75	26.58	26.42	26.20	26.02	25.97
1500	26.74	26.83	27.00	27.10	27.12	27.17	27.00	26.90	26.90	26.82	26.71	26.48	26.22	26.02	25.92
1530	26.63	26.74	27.04	26.99	26.97	27.00	26.85	26.75	26.75	26.69	26.49	26.32	26.08	25.90	25.81
1600	26.62	26.34	26.45	26.45	26.59	26.61	26.46	26.39	26.45	26.33	26.16	26.02	25.76	25.61	25.55
1630	25.98	26.13	26.24	26.16	26.39	26.43	26.24	26.18	26.19	26.12	25.96	25.80	25.55	25.41	25.34
1700	25.64	25.57	25.62	25.70	25.73	25.75	25.64	25.64	25.67	25.63	25.49	25.38	25.15	25.03	24.98
1730	25.02	25.10	25.13	25.17	25.19	25.20	25.16	25.19	25.23	25.20	25.08	25.02	24.84	24.74	24.69
1800	24.67	24.75	24.77	24.78	24.77	24.81	24.79	24.82	24.66	24.84	24.74	24.71	24.57	24.49	24.45
1830	24.16	24.20	24.20	24.19	24.20	24.24	24.24	24.30	24.33	24.30	24.19	24.17	24.08	24.05	24.03
1900	23.97	24.01	24.01	23.99	24.02	24.04	24.04	24.10	24.13	24.11	24.00	23.97	23.88	23.85	23.83
1930	23.70	23.74	23.73	23.72	23.73	23.77	23.77	23.84	23.89	23.88	23.78	23.79	23.71	23.68	23.67
2000	23.47	23.50	23.50	23.47	23.47	23.50	23.51	23.57	23.61	23.60	23.52	23.52	23.45	23.44	23.44
2030	23.38	23.41	23.40	23.37	23.37	23.40	23.41	23.48	23.52	23.50	23.41	23.40	23.34	23.33	23.33
2100	23.26	23.30	23.28	23.26	23.26	23.20	23.29	23.36	23.40	23.39	23.31	23.30	23.25	23.24	23.25
2130	23.11	23.15	23.14	23.13	23.14	23.16	23.17	23.24	23.29	23.30	23.22	23.24	23.18	23.16	23.17
2200	22.96	23.00	23.00	[illegible]	23.01	23.04	23.04	23.12	23.17	23.18	23.11	23.14	23.09	23.08	23.07
2230	22.79	22.84	22.84	[illegible]	22.84	22.87	22.89	22.96	23.02	23.04	22.98	23.03	22.99	22.99	22.98
2300	22.66	22.72	22.72	22.72	22.73	22.73	22.76	22.84	22.90	22.92	22.86	22.92	22.89	22.87	22.89
2330	[illegible]	[illegible]	[illegible]	22.61	22.61	22.64	22.64	22.72	22.78	22.80	22.75	22.82	22.79	22.80	22.81

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW FOREST TOWER

JULY 1979, 6 - LEVELS: 0,5,10,20,50,100, (IN CM)

L.S.T.	16	17	18	19	20	21
0000	23.35	23.66	23.93	23.97	23.91	23.92
0030	23.35	23.63	23.91	23.96	23.92	23.92
0100	23.64	23.59	23.89	23.95	23.92	23.92
0130	23.57	23.56	23.87	23.94	23.92	23.92
0200	23.33	23.50	23.83	23.92	23.93	23.92
0230	23.31	23.48	23.81	23.91	23.93	23.92
0300	23.45	23.45	23.79	23.89	23.93	23.92
0330	23.45	23.42	23.77	23.88	23.93	23.92
0400	23.43	23.39	23.75	23.87	23.93	23.92
0430	23.40	23.37	23.73	23.86	23.93	23.92
0500	23.37	23.34	23.71	23.84	23.93	23.92
0530	23.34	23.31	23.69	23.83	23.93	23.92
0600	23.31	23.27	23.67	23.82	23.93	23.92
0630	23.29	23.26	23.65	23.80	23.93	23.92
0700	23.29	23.26	23.63	23.79	23.93	23.92
0730	23.32	23.30	23.61	23.77	23.92	23.92
0800	23.37	23.35	23.61	23.76	23.92	23.92
0830	23.46	23.44	23.62	23.76	23.93	23.92
0900	23.50	23.49	23.61	23.74	23.92	23.92
0930	23.56	23.57	23.63	23.73	23.92	23.93
1000	23.50	23.62	23.62	23.71	23.91	23.93
1030	23.76	23.78	23.66	23.72	23.90	23.91
1100	23.8[illegible]	23.92	23.70	23.72	23.90	23.91
1130	23.95	23.99	23.74	23.73	23.89	23.91
1200	24.03	24.09	23.79	23.74	23.89	23.91
1230	24.13	24.19	23.82	23.74	23.87	23.91
1300	24.16	24.25	23.87	23.76	23.87	23.91
1330	24.19	24.28	23.92	23.78	23.87	23.91
1400	24.31	24.39	24.02	23.85	23.87	23.91
1430	24.35	24.44	24.05	23.87	23.87	23.91
1500	24.41	24.50	24.11	23.90	23.87	23.91
1530	24.50	24.55	24.14	23.93	23.87	23.91
1600	24.45	24.49	24.10	23.90	23.86	23.91
1630	24.41	24.46	24.13	23.93	23.86	23.91
1700	24.39	24.43	24.18	23.97	23.86	23.91
1730	24.34	24.37	24.19	23.99	23.86	23.91
1800	24.28	24.30	24.18	24.01	23.89	23.91
1830	24.21	24.21	24.19	24.04	23.89	23.91
1900	24.15	24.15	24.18	24.05	23.90	23.91
1930	24.10	24.09	24.16	24.05	23.90	23.91
2000	24.04	24.03	24.15	24.06	23.90	23.91
2030	23.99	23.97	24.13	24.06	23.90	23.91
2100	23.94	23.93	24.10	24.05	23.91	23.91
2130	23.90	23.88	24.08	24.05	23.92	23.91
2200	23.[illegible]	23.83	24.06	24.04	23.92	23.91
2230	23.[illegible]1	23.79	24.03	24.04	23.92	23.91
2300	23.76	23.75	24.01	24.03	23.93	23.91
2330	23.73	23.71	23.99	24.02	23.93	23.91

AVERAGE WIND SPEED (M/SEC) - FOREST TOWER

SEPTEMBER 1970, 8 - LEVELS: 44,40,36,32,30,25,16,4. (IN M)

E.S.T.	1	2	3	4	5	6	7	8
0000	5.60	4.57	3.93	2.43	1.41	0.94	0.90	0.44
0030	[illegible]	4.34	3.76	2.28	1.26	0.97	0.92	0.43
0100	4.90	4.26	3.66	2.22	1.24	0.86	0.82	0.44
0130	4.71	4.25	3.62	2.21	1.23	0.84	0.78	0.45
0200	5.32	4.52	3.39	2.34	1.29	0.90	0.87	0.46
0230	5.36	4.55	3.95	2.32	1.28	0.92	0.86	0.47
0300	5.00	4.24	3.61	2.18	1.21	0.84	0.79	0.46
0330	4.70	3.99	3.39	2.06	1.13	0.83	0.80	0.40
0400	4.51	3.96	3.30	1.95	1.07	0.80	0.78	0.46
0430	4.06	3.98	3.45	2.03	1.12	0.81	0.79	0.49
0500	4.56	3.91	3.34	2.01	1.09	0.80	0.81	0.51
0530	4.72	3.98	3.34	1.93	1.05	0.81	0.81	0.51
0600	5.11	4.32	3.74	2.22	1.22	0.90	0.97	0.50
0630	4.58	3.94	3.28	1.92	1.01	0.77	0.71	0.41
0700	3.65	3.26	2.76	1.69	0.94	0.66	0.59	0.35
0730	3.75	3.22	2.75	1.69	0.91	0.66	0.59	0.35
0800	3.50	3.01	2.57	1.60	0.88	0.64	0.58	0.32
0830	3.41	2.93	2.53	1.57	0.83	0.62	0.61	0.32
0900	3.31	2.84	2.46	1.53	0.81	0.62	0.61	0.35
0930	3.35	2.96	2.57	1.64	0.90	0.65	0.67	0.36
1000	3.40	3.05	2.64	1.60	0.85	0.68	0.73	0.38
1030	3.11	2.76	2.42	1.54	0.81	0.64	0.68	0.37
1100	2.66	2.73	2.38	1.58	0.85	0.63	0.69	0.38
1130	2.60	2.92	2.45	1.61	0.89	0.62	0.67	0.35
1200	2.62	2.69	2.35	1.45	0.75	0.56	0.64	0.36
1230	3.20	3.13	2.68	1.69	0.87	0.62	0.71	0.41
1300	3.12	2.82	2.47	1.53	0.76	0.59	0.69	0.40
1330	3.26	2.28	2.50	1.54	0.79	0.59	0.68	0.37
1400	3.40	3.02	2.61	1.61	0.81	0.63	0.69	0.39
1430	3.70	3.27	2.81	1.71	0.82	0.65	0.75	0.40
1500	3.46	3.06	2.61	1.49	0.70	0.60	0.69	0.34
1530	3.67	3.22	2.77	1.61	0.76	0.63	0.67	0.33
1600	3.63	3.31	2.34	1.66	0.75	0.65	0.68	0.34
1630	3.07	2.70	2.30	1.33	0.57	0.53	0.54	0.26
1700	3.40	2.71	2.48	1.43	0.60	0.59	0.55	0.31
1730	3.44	2.96	2.50	1.34	0.59	0.64	0.64	0.37
1800	3.71	3.16	2.68	1.48	0.65	0.63	0.61	0.35
1830	3.61	3.30	2.79	1.57	0.73	0.66	0.62	0.34
1900	3.54	3.07	2.60	1.52	0.72	0.62	0.60	0.35
1930	3.74	3.21	2.69	1.59	0.76	0.65	0.61	0.34
2000	3.27	3.30	2.80	1.59	0.72	0.67	0.69	0.39
2030	3.63	3.11	2.64	1.49	0.68	0.63	0.66	0.37
2100	3.44	3.04	2.61	1.41	0.63	0.59	0.62	0.34
2130	3.32	2.94	2.38	1.29	0.57	0.55	0.56	0.31
2200	3.56	3.03	2.55	1.37	0.55	0.60	0.63	0.36
2230	4.12	3.51	2.90	1.48	0.93	0.71	0.70	0.39
2300	4.47	[illegible]	[illegible]	1.86	0.99	0.74	0.73	0.41
2330	4.47	3.92	[illegible]	1.86	0.99	0.73	0.71	0.42

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AVERAGE TEMPERATURES (C) - FOREST TOWER

SEPTEMBER 1,70, 15 - LEVELS: 40,40,36,32,28,24,20,16,12,8,6,4,2,0.5. (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	22.22	22.24	22.25	22.25	22.17	22.23	22.29	22.27	22.35	22.32	22.30	22.27	22.33	22.23	22.27
0030	22.19	22.15	22.17	22.17	22.09	22.20	22.21	22.20	22.29	22.27	22.27	22.26	22.34	22.23	22.27
0100	22.09	22.11	22.13	22.12	22.03	22.14	22.15	22.13	22.20	22.17	22.15	22.13	22.23	22.15	22.19
0130	22.10	22.12	22.14	22.13	22.14	22.15	22.15	22.14	22.21	22.18	22.15	22.11	22.17	22.09	22.14
0200	21.79	22.00	22.03	22.01	21.92	22.03	22.04	22.03	22.10	22.08	22.07	22.03	22.11	22.02	22.06
0230	21.73	21.93	21.95	21.92	21.83	21.93	21.94	21.94	22.00	21.97	21.95	21.93	22.00	21.90	21.94
0300	21.71	21.91	21.92	21.99	21.79	21.90	21.91	21.89	21.95	21.91	21.88	21.85	21.93	21.84	21.89
0330	21.69	21.90	21.90	21.98	21.79	21.89	21.90	21.88	21.94	21.90	21.87	21.82	21.90	21.80	21.85
0400	21.78	21.79	21.79	21.76	21.67	21.77	21.78	21.75	21.82	21.78	21.76	21.75	21.84	21.75	21.80
0430	21.77	21.78	21.78	21.75	21.65	21.75	21.75	21.72	21.77	21.73	21.71	21.68	21.77	21.68	21.73
0500	21.79	21.79	21.80	21.78	21.67	21.77	21.77	21.74	21.79	21.74	21.71	21.65	21.72	21.62	21.67
0530	21.72	21.72	21.72	21.70	21.60	21.70	21.70	21.66	21.70	21.64	21.62	21.60	21.69	21.60	21.65
0600	21.79	21.78	21.78	21.75	21.65	21.75	21.75	21.70	21.72	21.65	21.62	21.59	21.66	21.56	21.60
0630	21.85	21.86	21.86	21.95	21.75	21.84	21.84	21.78	21.80	21.72	21.69	21.65	21.72	21.60	21.65
0700	22.07	22.11	22.11	22.13	22.01	22.05	22.04	21.97	22.00	21.90	21.85	21.79	21.86	21.75	21.79
0730	22.40	22.50	22.50	22.55	22.43	22.35	22.41	22.30	22.33	22.22	22.13	22.06	22.11	21.99	22.03
0800	22.68	23.02	23.01	23.12	23.00	22.87	22.87	22.73	22.77	22.66	22.54	22.38	22.42	22.30	22.33
0830	23.41	23.57	23.55	23.71	23.58	23.42	23.37	23.24	23.28	23.19	23.07	22.89	22.86	22.71	22.74
0900	23.61	23.99	23.97	24.16	24.03	23.86	23.77	23.63	23.67	23.57	23.45	23.26	23.22	23.05	23.07
0930	24.38	24.57	24.55	24.77	24.67	24.68	24.34	24.19	24.30	24.11	23.98	23.77	23.71	23.51	23.49
1000	24.97	25.05	25.03	25.30	25.22	25.25	24.88	24.70	24.76	24.66	24.51	24.30	24.21	23.98	23.93
1030	25.42	25.61	25.60	25.87	25.78	25.76	25.45	25.27	25.30	25.19	25.02	24.78	24.65	24.41	24.36
1100	26.01	26.15	26.13	26.38	26.26	26.27	26.00	25.76	25.80	25.68	25.53	25.28	25.13	24.83	24.77
1130	26.06	26.16	26.17	26.36	26.26	26.24	26.10	25.84	25.88	25.77	25.62	25.35	25.20	24.90	24.85
1200	26.18	26.33	26.33	26.54	26.44	26.46	26.32	26.08	26.11	25.97	25.78	25.49	25.32	25.04	25.00
1230	26.09	26.26	26.27	26.45	26.34	26.37	26.20	25.92	25.96	25.83	25.70	25.48	25.35	25.08	25.03
1300	26.68	26.79	26.76	27.05	26.97	27.01	26.80	26.43	26.43	26.31	26.13	25.85	25.70	25.42	25.36
1330	26.96	27.07	27.07	27.33	27.24	27.34	27.14	26.80	26.78	26.60	26.41	26.09	25.94	25.67	25.60
1400	26.01	26.75	26.78	26.99	26.70	26.94	26.82	26.56	26.53	26.39	26.20	25.89	25.73	25.46	25.41
1430	26.42	26.43	26.50	26.71	26.66	26.74	26.70	26.41	26.45	26.43	26.29	26.10	25.95	25.64	25.54
1500	25.75	25.83	25.98	26.01	25.93	26.03	25.93	25.78	25.83	25.78	25.71	25.56	25.43	25.14	25.06
1530	25.51	25.57	25.59	25.71	25.62	25.70	25.58	25.47	25.52	25.45	25.36	25.21	25.10	24.82	24.77
1600	25.13	25.20	25.23	25.33	25.25	25.35	25.22	25.14	25.18	25.12	25.04	24.90	24.81	24.57	24.54
1630	24.88	24.91	24.90	24.95	24.94	24.91	24.87	24.73	24.75	24.65	24.56	24.40	24.38	24.22	24.23
1700	24.12	24.16	24.15	24.15	24.07	24.15	24.11	24.04	24.06	23.97	23.93	23.85	23.86	23.69	23.71
1730	23.64	23.85	23.55	23.84	23.77	23.83	23.81	23.72	23.72	23.61	23.57	23.53	23.58	23.44	23.46
1800	23.69	23.69	23.69	23.65	23.55	23.65	23.65	23.58	23.57	23.42	23.34	23.32	23.39	23.26	23.28
1830	23.41	23.40	23.41	23.36	23.26	23.36	23.39	23.34	23.35	23.22	23.14	23.09	23.16	23.03	23.06
1900	23.16	23.14	23.15	23.09	22.94	23.09	23.02	23.03	23.06	22.98	22.95	22.91	22.97	22.85	22.88
1930	23.19	23.14	23.09	23.01	22.36	22.93	22.90	22.82	22.84	22.79	22.78	22.77	22.85	22.73	22.76
2000	23.15	23.12	23.08	23.02	22.90	22.96	22.94	22.85	22.81	22.70	22.67	22.65	22.73	22.61	22.65
2030	23.12	23.11	23.10	23.04	22.91	23.01	22.94	22.86	22.81	22.66	22.63	22.61	22.69	22.58	22.61
2100	22.81	23.00	23.00	22.93	22.81	22.91	22.87	22.74	22.69	22.55	22.50	22.48	22.57	22.47	22.51
2130	22.63	22.91	22.81	22.73	22.61	22.71	22.69	22.56	22.53	22.42	22.38	22.39	22.49	22.40	22.44
2200	22.61	22.78	22.77	22.49	22.57	22.60	22.62	22.54	22.49	22.35	22.32	22.34	22.45	22.30	22.41
2230	22.50	22.52	22.57	22.50	22.37	22.46	22.44	22.38	22.36	22.22	22.17	22.17	22.23	22.21	22.26
2300	22.61	22.56	22.56	22.45	22.36	22.44	22.47	22.34	22.34	22.24	22.19	22.16	22.26	22.17	22.22
2330	22.52	22.76	22.74	22.56	22.57	22.60	22.54	22.46	22.44	22.31	22.26	22.22	22.27	22.16	22.21

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW FOREST TOWER

SEPTEMBER 1975, 6 - LEVELS: 0,5,10,20,50,100, (IN CM)

L.S.T.	15	17	18	19	20	21
0000	23.30	23.31	23.65	3.42	23.77	23.84
0030	23.26	23.29	23.63	3.41	23.77	23.83
0100	23.26	23.27	23.61	3.41	23.77	23.83
0130	23.24	23.25	23.59	3.41	23.77	23.83
0200	23.21	23.22	23.58	3.41	23.77	23.83
0230	23.18	23.19	23.56	3.40	23.77	23.84
0300	23.15	23.17	23.54	3.40	23.77	23.84
0330	23.12	23.14	23.52	3.40	23.77	23.84
0400	23.10	23.11	23.50	3.39	23.77	23.84
0430	23.07	23.08	23.48	3.39	23.77	23.84
0500	23.05	23.05	23.46	3.39	23.77	23.84
0530	23.02	23.03	23.44	3.39	23.77	23.84
0600	22.99	23.00	23.42	3.38	23.76	23.84
0630	22.98	22.98	23.40	3.38	23.76	23.84
0700	22.98	22.98	23.38	3.38	23.76	23.84
0730	23.00	23.00	23.37	3.38	23.75	23.84
0800	23.04	23.04	23.36	3.37	23.75	23.84
0830	23.11	23.12	23.36	3.37	23.75	23.84
0900	23.19	23.20	23.36	3.37	23.75	23.84
0930	23.27	23.29	23.38	3.37	23.75	23.84
1000	23.37	23.39	23.40	3.37	23.74	23.84
1030	23.48	23.51	23.43	3.37	23.74	23.84
1100	23.60	23.65	23.46	3.37	23.73	23.84
1130	23.68	23.75	23.51	3.37	23.73	23.84
1200	23.77	23.83	23.55	3.37	23.72	23.84
1230	23.83	23.91	23.60	3.37	23.72	23.84
1300	23.93	24.00	23.64	3.38	23.72	23.84
1330	24.05	24.14	23.69	3.38	23.71	23.84
1400	24.06	24.18	23.75	3.38	23.71	23.84
1430	24.14	24.24	23.82	0.00	23.70	23.84
1500	24.14	24.23	23.86	0.00	23.70	23.84
1530	24.11	24.18	23.89	0.00	23.70	23.84
1600	24.06	24.15	23.92	0.00	23.70	23.84
1630	24.04	24.10	23.93	3.43	23.76	23.69
1700	23.93	23.97	23.90	0.00	23.71	23.84
1730	23.87	23.91	23.90	0.00	23.71	23.84
1800	23.81	23.84	23.89	0.00	23.71	23.84
1830	23.75	23.78	23.88	0.00	23.72	23.84
1900	23.68	23.71	23.86	0.00	23.72	23.84
1930	23.63	23.65	23.84	0.00	23.72	23.84
2000	23.56	23.56	23.77	0.00	23.71	23.84
2030	23.50	23.52	23.75	0.00	23.71	23.84
2100	23.47	23.49	23.73	0.00	23.72	23.84
2130	23.43	23.46	23.71	0.00	23.72	23.84
2200	23.40	23.45	23.75	0.00	23.74	23.84
2230	23.37	23.40	23.69	0.00	23.72	23.82
2300	23.36	23.38	23.69	0.00	23.74	23.84
2330	23.34	23.35	23.68	0.00	23.77	23.84

AVERAGE WIND SPEED (M/SEC) - FOREST TOWER

DECEMBER 1970, 3 - LEVELS: 46,40,36,32,30,25,16,4, (IN M)

L.S.T.	1	2	3	4	5	6	7	8
0000	2.62	1.61	1.77	0.47	0.53	0.49	0.38	0.28
0030	2.69	1.77	1.78	0.49	0.55	0.51	0.41	0.31
0100	2.76	1.77	1.82	0.55	0.57	0.52	0.42	0.35
0130	2.81	1.82	1.94	0.59	0.57	0.53	0.44	0.36
0200	2.79	1.67	2.10	0.57	0.59	0.59	0.48	0.37
0230	2.92	1.98	2.03	0.62	0.58	0.54	0.50	0.34
0300	[illegible]	2.09	2.14	0.61	0.54	0.56	0.49	0.33
0330	3.20	2.36	2.41	0.61	0.59	0.63	0.50	0.33
0400	3.29	2.60	2.46	0.81	0.61	0.64	0.52	0.38
0430	3.56	2.79	2.65	0.79	0.64	0.70	0.54	0.39
0500	3.42	2.93	2.61	0.84	0.69	0.69	0.54	0.36
0530	3.27	2.81	2.45	0.75	0.65	0.62	0.49	0.36
0600	3.12	2.19	2.31	0.78	0.57	0.55	0.44	0.36
0630	3.03	2.09	2.20	0.61	0.49	0.53	0.40	0.34
0700	3.07	2.12	2.21	0.71	0.55	0.60	0.43	0.36
0730	3.09	2.54	2.24	0.70	0.63	0.62	0.50	0.36
0800	3.46	3.02	2.72	0.81	0.78	0.76	0.59	0.44
0830	3.76	2.98	2.85	0.83	0.82	0.82	0.69	0.44
0900	4.03	3.16	3.10	0.97	0.93	0.89	0.75	0.55
0930	4.41	3.36	3.51	0.98	1.08	0.98	0.83	0.67
1000	4.48	3.68	3.63	1.01	1.07	1.09	0.90	0.67
1030	4.47	3.79	3.61	1.04	1.11	1.09	0.92	0.67
1100	4.55	4.06	3.66	0.92	1.11	1.12	0.90	0.68
1130	4.34	3.91	3.48	0.91	1.08	1.05	0.90	0.76
1200	4.27	3.82	3.40	0.88	0.99	1.06	0.88	0.74
1230	4.42	3.99	3.56	0.94	1.09	1.06	0.88	0.73
1300	4.22	3.79	3.35	0.86	0.99	1.02	0.83	0.71
1330	4.20	3.75	3.33	0.80	1.00	1.02	0.82	0.66
1400	4.21	3.76	3.36	0.83	0.97	0.99	0.81	0.64
1430	4.30	3.65	3.46	0.75	0.99	1.03	0.81	0.66
1500	4.14	3.72	3.31	0.92	0.98	0.96	0.78	0.64
1530	3.95	3.54	3.18	0.62	0.85	0.91	0.67	0.55
1600	3.78	3.37	2.96	0.61	0.79	0.80	0.58	0.47
1630	3.72	3.24	2.87	0.51	0.76	0.76	0.49	0.39
1700	3.42	3.00	2.62	0.55	0.64	0.65	0.41	0.32
1730	3.35	2.28	2.48	0.43	0.48	0.59	0.36	0.29
1800	3.39	2.79	2.32	0.42	0.44	0.57	0.32	0.28
1830	3.36	2.49	2.34	0.44	0.44	0.54	0.34	0.28
1900	[illegible]	2.47	2.23	0.41	0.45	0.51	0.34	0.28
1930	3.21	2.35	2.24	0.33	0.43	0.48	0.31	0.26
2000	3.01	2.12	2.06	0.34	0.39	0.42	0.28	0.26
2030	2.92	2.11	1.99	0.36	0.41	0.39	0.27	0.26
2100	2.95	2.22	2.03	0.39	0.47	0.45	0.29	0.25
2130	3.06	2.15	2.06	0.51	0.57	0.52	0.36	0.30
2200	3.06	2.03	2.13	0.49	0.59	0.56	0.39	0.29
2230	3.04	1.91	2.09	0.48	0.54	0.52	0.37	0.31
2300	3.13	2.01	1.97	0.47	0.57	0.50	0.35	0.29
2330	3.13	1.73	2.15	0.62	0.64	0.55	0.39	0.29

AVERAGE TEMPERATURES (C) - FOREST TOWER

DECEMBER 1979, 15 - LEVELS: 46,40,36,32,28,24,20,16,12,8,6,4,2,0.5, (IN M)

L.S.T.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0000	18.64	18.25	18.30	17.91	17.72	17.87	17.94	17.78	17.57	17.16	16.88	16.80	16.85	16.87	16.91
0030	17.89	17.91	17.99	17.85	17.39	17.53	17.61	17.42	17.25	16.85	16.60	16.50	16.59	16.60	16.64
0100	17.34	17.63	17.69	17.25	17.09	17.24	17.30	17.11	16.93	16.57	16.33	16.25	16.34	16.35	16.40
0130	17.10	17.36	17.44	16.96	16.55	17.00	17.06	16.86	16.68	16.32	16.10	16.04	16.13	16.16	16.21
0200	16.64	17.10	17.16	16.74	16.62	16.77	16.84	16.70	16.51	16.16	15.93	15.86	15.95	15.98	16.03
0230	15.58	16.79	16.37	16.52	16.40	16.51	16.58	16.47	16.30	16.01	15.81	15.75	15.83	15.87	15.93
0300	15.27	16.52	16.63	16.22	16.12	16.31	16.37	16.19	16.03	15.74	15.57	15.54	15.65	15.69	15.75
0330	16.05	16.33	16.41	16.03	15.95	16.11	16.19	15.98	15.82	15.51	15.35	15.32	15.44	15.50	15.56
0400	15.61	16.09	16.17	15.77	15.66	15.83	15.93	15.73	15.60	15.30	15.14	15.12	15.25	15.31	15.38
0430	15.68	15.86	15.94	15.66	15.55	15.65	15.74	15.60	15.44	15.13	15.00	15.00	15.13	15.21	15.28
0500	15.43	15.62	15.68	15.41	15.32	15.43	15.52	15.43	15.31	15.02	14.86	14.87	15.00	15.06	15.14
0530	15.25	15.42	15.49	15.20	15.05	15.19	15.28	15.20	15.10	14.81	14.67	14.67	14.80	14.86	14.93
0600	15.10	15.25	15.31	15.01	14.85	15.21	15.11	15.02	14.92	14.66	14.53	14.53	14.66	14.71	14.79
0630	15.04	15.18	15.20	14.92	14.72	14.87	14.96	14.87	14.78	14.52	14.40	14.40	14.52	14.58	14.65
0700	15.73	15.73	15.51	15.80	15.14	15.20	15.13	15.00	14.86	14.57	14.41	14.40	14.51	14.57	14.64
0730	16.72	16.40	16.05	16.94	16.70	15.82	15.59	15.47	15.37	15.11	14.83	14.73	14.79	14.84	14.91
0800	17.16	16.67	16.36	17.50	17.24	16.14	16.02	15.96	15.89	15.71	15.44	15.22	15.20	15.25	15.31
0830	17.46	16.98	16.70	17.94	17.70	16.46	16.40	16.37	16.32	16.20	16.01	15.76	15.67	15.70	15.75
0900	17.63	17.31	17.07	18.37	18.74	16.90	16.81	16.85	16.79	16.68	16.53	16.30	16.18	16.17	16.19
0930	19.10	17.67	17.56	18.72	19.35	17.63	17.51	17.58	17.60	17.73	17.32	17.12	16.96	16.96	16.93
1000	18.53	18.07	17.97	19.00	19.68	18.78	18.17	18.19	18.24	18.44	18.10	17.79	17.67	17.59	17.54
1030	19.85	18.39	18.33	19.32	19.99	19.70	18.43	18.86	18.55	19.43	18.64	18.29	18.15	18.11	18.04
1100	19.32	18.87	18.81	19.74	20.38	20.12	18.96	19.22	19.30	19.56	19.07	18.84	18.86	19.03	18.88
1130	19.39	19.41	19.36	20.27	20.86	20.66	19.60	19.63	19.91	19.63	19.54	19.38	19.34	19.44	19.24
1200	20.37	19.83	19.80	20.64	21.18	20.98	20.08	20.07	20.35	20.17	20.02	19.83	19.69	19.58	19.48
1230	20.79	20.26	20.25	21.04	21.54	21.47	20.51	20.50	20.59	20.81	20.65	20.36	20.21	20.03	19.91
1300	21.26	20.70	20.66	21.47	21.91	21.78	20.86	20.86	20.99	20.92	20.80	20.60	20.52	20.42	20.29
1330	21.55	20.94	20.71	21.70	22.15	21.89	21.09	21.26	21.47	21.12	20.97	20.80	20.70	20.53	20.42
1400	21.67	21.27	21.23	22.00	22.47	21.95	21.42	21.49	21.67	21.39	21.21	21.01	20.87	20.61	20.51
1430	21.97	21.42	21.39	22.09	22.55	21.92	21.57	21.57	21.69	21.49	21.36	21.17	20.97	20.66	20.50
1500	21.99	21.51	21.47	22.10	22.51	21.87	21.62	21.58	21.57	21.47	21.36	21.19	21.01	20.74	20.58
1530	21.74	21.52	21.49	22.06	22.40	21.76	21.68	21.55	21.51	21.41	21.28	21.08	20.80	20.51	20.33
1600	21.64	21.44	21.32	21.89	22.11	21.50	21.47	21.34	21.29	21.17	21.01	20.68	20.44	20.14	19.99
1630	21.54	21.23	21.18	21.56	21.70	21.22	21.26	21.08	21.05	20.91	20.66	20.24	19.96	19.71	19.62
1700	20.99	20.81	20.77	20.94	20.94	20.73	20.72	20.61	20.57	20.35	19.99	19.53	19.39	19.20	19.15
1730	20.30	20.29	20.29	20.09	19.93	20.06	20.18	20.08	20.02	19.70	19.24	18.71	18.64	18.52	18.52
1800	19.79	19.90	19.94	19.55	19.37	19.66	19.79	19.66	19.58	19.17	18.64	18.07	18.03	17.95	17.97
1830	19.52	19.64	19.09	19.25	19.10	19.36	19.50	19.37	19.26	18.83	18.17	17.68	17.66	17.61	17.64
1900	19.29	19.39	19.46	19.02	18.85	19.12	19.26	19.13	19.00	18.53	17.83	17.41	17.40	17.37	17.41
1930	19.08	19.19	19.25	18.90	18.65	18.92	19.07	18.94	18.82	18.28	17.57	17.17	17.19	17.16	17.20
2000	18.96	19.03	19.13	18.71	18.58	18.82	18.94	18.80	18.65	18.14	17.45	17.05	17.03	17.01	17.06
2030	18.82	18.93	18.79	18.57	18.45	18.67	18.81	18.66	18.48	17.95	17.31	16.90	16.88	16.86	16.91
2100	18.75	18.86	18.92	18.55	18.45	18.64	18.75	18.60	18.39	17.99	17.39	16.93	16.85	16.84	16.89
2130	18.59	18.70	18.79	18.42	18.33	18.49	18.59	18.47	18.29	17.87	17.46	17.17	17.02	16.96	16.98
2200	18.38	18.53	18.61	18.23	18.14	18.30	18.40	18.24	18.04	17.57	17.26	17.07	17.02	16.97	16.98
2230	18.15	18.27	18.32	17.93	17.99	18.01	18.13	18.02	17.82	17.35	17.04	16.88	16.89	16.84	16.86
2300	17.82	17.97	18.02	17.65	17.31	17.66	17.80	17.70	17.53	17.09	16.79	16.66	16.69	16.66	16.69
2330	17.50	17.66	17.72	17.30	17.23	17.41	17.51	17.40	17.25	16.94	16.54	16.46	16.52	16.51	16.54

AVERAGE SURFACE AND SUBSURFACE TEMPERATURES (C) - BELOW FOREST TOWER

DECEMBER 1970, 6 - LEVELS: 0,5,10,20,50,100, (IN CM)

L.S.T.	16	17	18	19	20	21
0000	18.09	18.31	19.06	19.27	20.15	21.61
0030	17.99	18.24	19.02	19.26	20.16	21.61
0100	17.88	18.16	19.00	19.25	20.16	21.61
0130	17.79	18.08	18.97	19.24	20.16	21.61
0200	17.69	18.00	18.93	19.23	20.16	21.60
0230	17.62	17.93	18.90	19.22	20.17	21.60
0300	17.54	17.86	18.87	19.20	20.17	21.60
0330	17.46	17.78	18.83	19.18	20.17	21.60
0400	17.37	17.71	18.80	19.16	20.17	21.60
0430	17.30	17.64	18.76	19.14	20.17	21.60
0500	17.23	17.57	18.72	19.12	20.17	21.60
0530	17.13	17.50	18.68	19.10	20.17	21.60
0600	17.04	17.43	18.65	19.08	20.17	21.60
0630	16.94	17.35	18.61	19.05	20.17	21.60
0700	16.89	17.29	18.56	19.03	20.17	21.59
0730	16.93	17.29	18.53	19.01	20.17	21.59
0800	17.03	17.33	18.50	18.98	20.17	21.59
0830	17.16	17.41	18.47	18.96	20.17	21.59
0900	17.32	17.50	18.46	18.94	20.16	21.59
0930	17.55	17.65	18.45	18.91	20.16	21.59
1000	17.75	17.80	18.46	18.89	20.15	21.59
1030	17.93	17.97	18.47	18.88	20.15	21.59
1100	18.09	18.10	18.50	18.88	20.14	21.59
1130	18.27	18.24	18.53	18.87	20.14	21.59
1200	18.45	18.38	18.58	18.88	20.13	21.59
1230	18.62	18.53	18.62	18.89	20.12	21.59
1300	18.77	18.66	18.67	18.90	20.12	21.58
1330	18.83	18.75	18.72	18.92	20.11	21.58
1400	19.00	18.87	18.77	18.94	20.11	21.58
1430	19.03	18.94	18.83	18.96	20.10	21.58
1500	19.17	19.09	18.87	18.99	20.10	21.58
1530	19.14	19.06	18.92	19.01	20.09	21.58
1600	19.11	19.05	18.96	19.03	20.09	21.58
1630	19.04	19.02	18.99	19.06	20.09	21.58
1700	18.90	18.96	19.02	19.08	20.09	21.58
1730	18.75	18.85	19.04	19.11	20.09	21.58
1800	18.61	18.73	19.04	19.13	20.09	21.58
1830	18.46	18.61	19.04	19.14	20.09	21.58
1900	18.36	18.52	19.03	19.15	20.09	21.57
1930	18.25	18.43	19.02	19.16	20.09	21.57
2000	18.13	18.35	18.99	19.16	20.09	21.57
2030	18.07	18.29	18.97	19.16	20.09	21.57
2100	18.03	18.24	18.95	19.16	20.09	21.57
2130	18.00	18.21	18.93	19.15	20.10	21.57
2200	17.96	18.18	18.90	19.15	20.10	21.57
2230	17.92	18.14	18.88	19.14	20.10	21.57
2300	17.90	18.10	18.87	19.13	20.11	21.57
2330	17.87	18.04	18.85	19.12	20.11	21.57